POPULAR Computing WEEKLY

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Vol 5 No 15

Sinclair sells out

All rights go to Amstrad for £5m.

- Amstrad takes over all Sinclair's manufacturing and marketing
- QL almost certainly to be dropped
- Spectrum 128 to be repackaged with tape deck.
- Research and development on the 'Pandora' portable will continue at Sinclair.

Full details below and inside

AMSTRAD Consumer Electronics announced on Monday (April 7) that it has brought the manufacturing, marketing and brand-name rights to all Sinclair computer products worldwide.

It also has a first refusal option on future Sinclair machines.

The deal, announced jointly by Sir Clive Sinclair and Alan Sugar meeting between Sinclair and its creditors held over the Easter weekend to

continued on page 5 ▶

Win £2000 worth of prizes

- One Commodore 128D with colour monitor
- Two Atari 520 STMs with disc drive
- Plus 25 Mirrorsoft titles to be won

Word Wizards – turn to p12

Get Dexter and Doomsday Blues

Hot new titles from PSS

Colour feature see page 16





Magick Book.
Heavy on the Magick
GARGOYLE GAMES
SPECTRUM 48/128K
AMSTRAD
CBM 64/128
£9·95

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REGULARS

Sinclair Research invented the home computer market in this country. It cut the price of the technology by inventiveness and audacious design. A market grew of hobbyists – devoted computer users quite happy to fiddle with leads and tape recorders and unconcerned by rubber keyboards.

Then the market grew even further, and despite graphics and sound shortcomings the Spectrum attracted an enormous software base.

Sinclair has not changed all that much in the years since its first success, but the market has, and that is why it has ended as we know it – selling its cherished computers and name to Amstrad.

The past year or so has been a battle between research-led companies like Sinclair, making exciting technological leaps, and marketing operations like Amstrad which positively prides itself on not taking dramatic steps, on using tried, tested even dull technology and treating computers like any other consumer item. The policy has worked, superbly.

However, Sir Clive has characteristically hung on to two of his favourite projects, the Pandora portable and research into wafer-scale integration. One hopes that the separate companies set up make a go of the research and find willing buyers.

It's hard to portray the outcome of that battle as anything other than a total victory for Amstrad. As such it must be congratulated on its success. Now that Sir Clive has the telecommunication, wafer scale intergration and other, as yet unspecified, projects to fill his time and test his inventiveness, we wish him the best of luck.

Whatever happens now, an era has ended.

Amstrad's share of the home computer market is now well over 50% and it will be a strong test of Commbdore and Atari's stamina, creativity and marketing to keep up.

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Acorn confident as losses decrease by £20 million

ACORN has announced that it expects to make a pre-tax loss of £2.94 million for the six months up to December 1985. This is a considerable improvement on its £22.2 million loss for the previous 12 months.

On a turnover of £20.12 million, the company reports an operating loss of £97,000. However, when exceptional items, such as covering the stock still left over from Acorn's disastrous forays into the US and German markets, tax credits (of £2.29 million) and provisions for the outcome of Acorn's VAT investigation by Customs and Excise are taken into account, the eventual retained loss, after tax, is estimated at around £1.67 million.

"The figures are marginally better than we had dared to hope for," said an Acorn spokesman. "We don't anticipate a substantial change from these figures when the confirmed results appear. The VAT investigation should be resolved next month, and we feel we have been generous in our provision of £345,000 for that."

Acorn became subject to the VAT inspection six months ago after it did not provide accurate records for the previous year.

However, the company's turnover is still heavily dependent on one product series – the machines endorsed by the BBC. This is currently accounting for 90% of turnover, and income from Acorn's developments in RISC technology and the Communicator 16-bit machine has not yet materialised.

"The Master series will remain our bread and butter for a time," the spokesman continued. "RISC development will not be coming through until next year. The Communicator is not engendering any revenue now, and won't for the first six months of the year.

However, we are negotiating various contracts, particularly encouraging is the interest shown in the Communicator by Olivetti UK, which sees it as a potential product in the financial market."

Original 520ST package dropped

ATARI has after all dropped the original configuration of the 520ST, launched here last September. The new 520STM and 1040STF plus the promised 520STFM have superseded it.

Atari UK is out of stock of the 520ST cpu minus TV modulator with external disc drive package, which retailed for £749 with a monochrome monitor. Its main stockist and distributor, Silica Shop, says it won't be buying any more such packages.

"It simply isn't necessary with the new machines," said John Arundel of Silica Shop. "We have two disc drives on sale – a 1M version for £199, and a ½M version at £149, so customers now have a choice."

The original 520ST package

Atari UK's marketing manager, Rob Harding, added: "If you buy the STM, disc drive and monitor, you'll find it comes to the same price."

Microprose move to UK

ONE of the major US software companies, Microprose, is planning to set up a division in the UK. Currently, Microprose's titles are handled by US Gold. A spokesman for US Gold said: "Microprose's main consideration is that in the US it is a household name, whereas in the UK it's just part of US Gold, and it wants to see a bigger UK profile."

Two new titles from Talent

TALENT has announced two new packages which it will release in May.

The first, *Talisman*, is a database for the Atari ST range. Fully menu-driven and integrated with the Gem operating system, Talent prides itself on *Talisman's* ease of use. The system handles multi-line fields, class variables and many other features. *Talisman* will cost £89.95.

The second, *Techniql* (for the QL) is designed to complement Talent's earlier release, *Graphiql*. It is a two-dimensional CAD program which includes a zoom facility, rubber-banding on all drawing tools, and a facility to create a library of user-defined shapes which can be placed anywhere in any design.

It is also compatible with QL disc drives and Ram expansions. *Talisman* will cost £49.95.

Gargoyle expands into new markets

GARGOYLE Games, acclaimed for titles such as *Sweevo's World*, will move both up- and down-market this year.

The company plans to launch a new arcade games label at the *Personal Computer World* Show in September. Four games will initially be released on the label, which will concentrate on sporting and martial arts simulations.

"That particular market may be full, but it's not full of high quality stuff," said Greg Follis of Gargoyle. "We also consider it an easier field to write for than adventures."

Gargoyle is also developing an integrated accounts system for the Amstrad PCW machines, also at the September show, under the label Carter-Follis Software.

Next year, Follis hopes to release business software for IBM compatible machines – the area where both he and fellow Gargoyle programmer Roy Carter worked before setting up the present company. "It was always our intention to produce business software," he said. "And although we're now fully committed to games, we shouldn't stand still."

Ocean reclaims Superbowl

SOME copies of Ocean's *Superbowl* for the Spectrum have been sold with a major bug in them – which will be exchanged by Ocean.

"The first lot of Spectrum versions we delivered had something wrong with them," said an Ocean spokeswoman. "Anyone who wants to exchange their copy can do so."

The address to write to is Ocean Software, 6 Central Street, Manchester M2 5NS.

Sinclair sells out to Amstrad

◄ continued from page 1

discuss the £6-7 million still owed by Sinclair following its cash crisis last summer

'It's a very good deal for us,' said Amstrad's chairman Alan Sugar 'Sinclair computers have dominated the entertainment market for some years We see them adding substantially to our business'

Sir Clive added, "In computers we see ourselves as pioneers in technology We have now handed the business over – rather later than we should have done – to a proven marketing company '

As well as buying rights to the computers for £5 m Amstrad has bought Sinclair's inventory of stock This has wiped out Sinclair's £7 debt

Alan Sugar spoke of enhancements Amstrad intended to make to the current Spectrum 128 It seems likely that a built-in tape recorder will be added to the Spectrum 128 in time for the Christmas market. It is possible a joystick port will be incorporated as well and Sugar says he is aiming at £139 for the package

But he is not so enamoured with the QL. 'The QL has not attracted the best publicity Sugar said 'There will be a destocking of that product I don't see much future in it.' However, he added that Amstrad's engineers had yet to look at the QL in detail and it might be possible to offer it with a built-in disc drive

Sinclair Research is to continue as a holding company Its telecommunications division, based in Winchester is to be floated off with Sinclair Research retaining a large minority holding in the new company Its wafer-scale intergration project is also to be set up as a separate company with initial backing from Barclays Bank Sinclair will retain a majority shareholding and expects the first product from that project a 40 megabit memory wafer next year Pandora the portable, will continue as a major project ' Sir Clive said We have talked to Amstrad which has expressed interest about bringing it out

There will be a large number of redundancies made at Sinclair Research, although Sir Clive would not say how many, nor specifically who would leave Most of the lay-offs will be in marketing and distribution departments

Alan Sugar dismissed the idea that products such as the Spectrum 128 represented competition for Amstrad's CPC series "We have always viewed our computers as a step-up from entertainment' he said We offer more for serious use – of late, in the word processing market.

Sugar also discussed one plan for quality control on Sinclair machines – a quality control endorsed sticker which would be attached to software packages that had been submitted to Amstrad and checked to make sure they used no illegal software calls which affect compatibility between the alternative memory-sized machines Amstrad would then promote packages with the sticker to the public

Sugar also said he hoped the Spectrum 128 would continue to be manufactured by the three sub-contractors in the UK Timex AB Electronics and Thorn, rather than moving to Korea where Amstrad's computers are made

Budget titles ready soon from US Gold

A BUDGET range from US Gold seems on the cards comprising previously unreleased American titles from existing licensors to US Gold

Current US Gold games all sell for £9 95 The budget range will probably sell for £2 99 rather than the rock-bottom figure of £1 99 because of the royalties that US Gold has to pay to the original publishers

The company is also planning to expand into the 16-bit software market with the release of titles for the Atari STs

We have some ST products coming along from our regular sources said US Gold general manager Tim Chaney 'But as yet, we're not planning anything for the Amiga There's no point in releasing Amiga software before the machine is released – we'll wait on that one

Doomdark's Revenge on the phone

BEYOND Software has come up with some interesting ideas to accompany its newly launched Commodore version of *Doomdark's Revenge*

Instead of a booklet setting the scenario for the game the package contains an audio cassette telling the background story to *Doomdark*

The company has also set up two telephone lines telling a different episode from the cassette each day In 14 parts After two weeks the telephone recording will go back to the beginning of the tale

The first telephone broadcast will be on April 14 Numbers to ring are 00771 1156 for a new extract each day and 00771 57 for an update on previous episodes

Doomdark's Revenge for the Commodore 64 costs £9 95

New viewdata system set up

SCREEN View has recently set up an information database which its hopes will provide competition for the likes of Yellow Pages Teledata and Prestel The system named Casper can be accessed via modem (with 300/300 1200/75 1200/1200 and 2400/2400 optional or rung up and questioned via an operator it provides an eighty column display with a built-in search facility, based around IBM hardware At present the system has 20 lines, but has a capability for 960

For a trial period, the system is free to use but after this time a charge of £5 00 for 500 minutes on-line will be made

Phone 01-724 8000 (for modems) or 724 2100 (other enquires)

French without tears from Pear Tree

THE British have long been renowned for their refusal to learn foreign languages Now, thanks to your BBC Micro, you don't have to

A package called *Tick-Tack* from Pear Tree Software, will automatically translate letters into French German or Spanish it works by substituting the foreign equivalents of English sentences selected by codes from the manual

You write something like V21 X12, Y34 and so on and out comes a lucid letter in the language of your choice There are however two catches The first is that it covers business requirements only, so writing to your pen-friends in France is out unless they like to hear things like 'Re your inquiry of the 19th inst

The second is that it costs £160 per language pack An evening class would probably be cheaper but the bone-idle can get further details from Pear Tree on 0460-50595

Compunet opens to CPC users?

IT seems likely that Amstrad owners may, in the near future, be able to access Compunet, the network currently only available to Commodore users

Compunet always planned to eventually extend the database to accommodate owners of other micros but apparently specific tests are now being carried out and the Amstrad CPCs will be the next machines to join the network

The Spectrum has been ruled out as a possibility because of its 32 column display

Compunet's editor, Jane Firbank said There is nothing definite to be said We are thinking of other machines and always have done in fact, we are evaluating a number of machines We will not be going on to the Amstrad in the next two months '

She did however add that Compunet would have some announcements to make at the Commodore show in May

Welsh processing on the BBC

GOOD news for language freaks Clwyd Technics has launched a Welsh language version of *Edword* its word processing package for the BBC educational market

The new version supports on-screen menus and commands in Welsh and is supported by full Welsh documentation *Edword Cymraeg* costs £45.95 from Unit 4b Antelope Industrial Estate, Rhydymwyn, nr Mold, Clwyd

Pagemaker ready for Amstrads

DESKTOP publishing, the "in" activity of 1986, has reached the Amstrad micro range courtesy of Advanced Memory Systems *Pagemaker* package for the 464, 664 and 6128

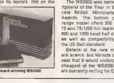
Running in conjunction with the AMX Mouse (see this week s Hardware review, page 9). *Pagemaker* allows you to design A4 pages incorporating headlines, test and graphics – handy for newsletters and posters

The twin-disc package costs £49 95 and requires the AMX Mouse package as well

AMS has also announced the release of *AMX Utilities* a support package for the mosue which includes enhanced graphics effects and a wider range of printer drivers It will cost £14 95 on cassette and £19 95 on disc

Miracle to expand WS range

HAVING established itself as one of Britain s top modem manufacturers Miracle Technology shows no signs of resting on its laurels Hot on the heels of an award for its WS3000 modem Miracle has revealed that it will be extending the range shortly


The award-winning WS3000

The WS3000 was named Peripheral of the Year in the recent British Microcomputing Awards The bottom of the range model offers 300 1200/75 and 75/1200 full duplex and 600 and 1200 baud half duplex as well as compatibility with the US Bell standard

Details of the new modem are scarce but Miracle did reveal that it would undercut the cheapest of the WS3000 models currently selling for £295

ZX81 Superbasic?

THE ZX81 is alive and kicking proof of this comes from Nick Godwin, who has just launched his extended Basic for the machine

ZXEB is a supplementary Basic system which adds 44 instructions to the ZX81 s built-in language The new instructions deal with manipulation of graphics and text windows, handling of line data, keyboard input translation of numbers to hex or binary code, Ramtop operation memory manipulation and variables

The £10 package also includes a manual and is available from Nick Godwin at 4 Hurker Crescent, Eyemouth Berwickshire, Scotland TD14 5AP

Pocket Wordstar cut in price

MICRO-PRO has dropped the price of *Pocket Wordstar* the cut-down version of the business package *Wordstar*

Pocket Wordstar available for the full Amstrad range from 464 to 8512, now costs £49 95

IBM portable

IBM has announced the latest stage in its plan for world domination – the long-awaited lapheld computer Only a few months late, the IBM PC Convertible features a removable LCD screen twin 3½ inch discs and a $2 000 price tag

Scheduled for May release in the US the newcomer is most interesting for its use of 3½ inch drives – a move certain to seal the fate of the ancient 5¼ inch and 3 inch versions

No UK pricing or availability has been announced

Shadow Ram

WATFORD Electronics has acquired the manufacturing rights to Aries Shadow Ram products.

Under the terms of the deal Watford will be handling the Aries B20 and B32 Ram cards, the B12 Rom board and the B488 IEEE interface Former managing director Peter Headland has been retained as a consultant by Watford

Prospective customers can talk to Watford on 0923-40588

Letters

Clear view

Regarding the letter in issue no 11 from Mr Walker, might I suggest he tries playing *Movie* on a decent TV set. My copy is anything but jerky and the clear isometric view is in my opinion the best since *Knight Lore*

There is nothing random about the way in which your character catches a bullet when entering a room as all the characters except the heroine are always in the same locations

Does Mr Walker not think that if the heroine was found in the same place every time the game would become just a little too predictable?

Before finishing could I make a plea to anyone who knows any of the less obvious passwords to send them in, especially the one to open the locked and unguarded room next to the one containing four TVs and a terminal

Mark Rawson
Bolton
Lancs

Off-hand attitude

Although the PCW8256 continues to be marketed as a business machine the question is whether it is suitable for the purpose?

How does a prospective user judge whether the Amstrad is suitable for his needs other than by reading the commercially biased assessments published by the media or by accepting the publicity material produced by Amstrad?

Having bought a machine the user is almost entirely dependent upon the manuals supplied with the package Are they good enough for the non-computer orientated newcomer?

When faced with malfunctions or the need for repairs how does the newcomer deal with them in view of Amstrad's non-committal to long-term support?

Also consider some of the statements in Amstrad's sales brochure "Each disc holds some 180 000 characters" not true – the maximum capacity of a formatted CF2 disc is 173K

The word processing software has been specifically written to provide all the features and facilities expected of a professional stand alone word processing system Yet features such as a spelling checker word count mailmerge and indexing – all commonly provided on professional wp software – are not included in *Locoscript*

It's about time Amstrad matured and discarded its off-hand attitudes If Amstrad is serious about its long term interest in the business computer market it will need to drastically change its product support policy

D A Snoad
Southampton

***Popular Computing Weekly* is not "commercially biased". But we do think the 8256 is a good machine representing excellent value for money. We'd certainly agree that the documentation leaves a lot to be desired, but Amstrad is far from unique in this respect**

As to disc capacity, 173K is 177,152 characters, not a terrible shortfall! And as to "professional" software, *Wordstar* – the standard against which all others are judged – also fails to offer the features you list

In short, if you want a full-featured, business micro with top-quality software and a service contract, there are a large number of manufacturers who'd love to talk to you. Simply wave a cheque for £5 000 *(This letter was edited for length)*

Bonus points

I would like to add a few comments to your enthusiastic welcome (vol 5 no 10) of the QL *Scrabble* First let me say that I also think it could be one of the best of the QL more serious games But it has a few drawbacks which I feel could be overcome by the superior memory in comparison with the versions on other home computers

1 The most annoying feature is the inability to challenge the computer when it puts down words that do not exist, and immediately adds the points In my version this happens at least half a dozen times in each game – a typical example would be the computer announcing as its first move the word 'espuing' giving itself a bonus for a total of about 70 points! Surely the very nature of computers should lend itself ideally to having precise dictionaries unless of course it is also programmed to be funny – but I feel the game is far too good for that

2. The most desirable additional facility would be to let the player add and delete words from the dictionary, thus eliminating some of the anomalies This would put it on a par with the original game

3 The sound option does not work on my sample and I wonder whether some of the loading difficulties I experience from time to time (my original copy failed to load altogether) may be caused by the over-enthusiastic application of the safety precautions necessitating use of two microdrives

Finally I must confess that I enjoy the game very much in spite of the few shortcomings and I think the sunny and joyful introductory screen is wonderful

R B Vočadlo
The Uplands
Gerrards Cross
Bucks

Could you give me an estimate for the computer with an external disc drive monitor TV output – oh and a disc drive built in

Hidden inside

I like many other people have waited for the launch of Sinclair's new 128K Spectrum and have read with great interest the various reviews of the pros and cons of this new machine

However one point that I have noticed and has not been mentioned before concerns the General Instruments AY-3-8912 PSG That is to say that locked away in that chip is an 8 bit parallel I/O port Now I have not seen inside the machine yet but it must be possible to bring that I/O port to the outside world The I/O lines from the chip are pins 7 to 14 while the data lines are pins 21 to 28 (D0 to D7)

It makes you wonder what else may be hidden inside !

D Hayward
Lane End
Whelford
Nr Fairford
Gloucester

New keyboards

While exploring the character set on my new Spectrum 128, I discovered where Sinclair has put the two new keywords in Basic They have taken the place of two UDGs (T and U) replacing them with *Spectrum* and *Play*

I have also discovered some editing facilities that are only usually obtainable using the extra keypad If you go into Graphics mode pressing the following keys will have the given results

V – cursor to bottom of program
W – cursor to top of program
X – cursor to end of current line
Y – cursor to beginning of current line
Z – same function as choosing Screen after pressing *Edit*

Stephen Ralph
High Wycombe
Bucks

Amstrad contracts

I am writing to inform your readers about Amulet the international contact association for Amstrad users

Amulet has been formed to promote Amstrad machines and to assist Amstrad users in whatever way possible We will be offering contract with other users of similar systems a comprehensive fault finding service personal reviews of hardware software and books We will also operate a newsletter

Membership is open to anyone and details are available from the address below We would also ask software and hardware suppliers to send us information on their products so we can compile a comprehensive directory

Carl Stevenson
582 Wordsworth Avenue
Sheffield S5 9JJ


THE WAY OF THE TIGER
Enter the world of Avenger, a Ninja warrior of unparalleled skills and deadly powers as he battles the forces of evil in defence of his faith and protection of the weak.
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Cassette £9.95
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MSX 64K Spectrum 48K Amstrad CBM 64/128
TRIPLE-SCROLL
Screenshots from Spectrum 48K


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SAI COMBAT
Set against a series of subtle backgrounds, Sai Combat has 8 skill levels and can be played by one or two players, with a choice of 16 moves. The combatant sprites are large and easy to control via keyboard or joystick
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Spectrum 48K £9.95
Amstrad CPC £9.95
Commodore 64 £9.95 tape, £12.95 disk
Spitfire
40
PLUS
New expanded 128K Spectrum version with a full mission mode, improved sound, and more ground detail. Still only £9
ONLY THE BEST
FROM
MIRRORSOFT

AMX MOUSE

It's been a couple of years since the mice started swarming in the micro market Apple started it with the Lisa and Macintosh but was soon followed by IBM-compatible products from Digital Research and Microsoft among others

By far the most successful mouse breeder in the home computer sphere has been Advanced Memory Systems which now caters for rodent operators on the BBC, Spectrum and Amstrad

This new release is compatible with all Amstrad machines except the PCW 8256 and 8512 The package consists of the mouse and interface, and a collection of software utilities including the excellent *AMX Art* drawing program

Hardware

Setting up the mouse is very simple A two-way interface plugs into the Amstrad's joystick port, while the mouse itself connects to a 20-pin socket on the interface Power is re-routed from the monitor, to the interface and thence to the Amstrad itself Switch on the power and away you go

The mouse itself is perhaps the least satisfying part of the system although that isn't a major criticism It is a three-button model, which to the true mouse afficionado is two buttons too many The idea of the mouse is to "point and click" it should be intuitive, but three buttons confuse the issue

That said, the main source of irritation is the fact that the mouse tracks on a steel ball-bearing which makes it very noisy on hard surfaces, and badly prone to skidding. However these are relatively minor criticisms If you can find room on your deck for a rubber mat, the AMX mouse is reliable and accurate

Software

The bundled software is undoubtedly the star of the show The mouse is accompanied by four programs – *AMX Control AMX Art*, an icon designer and a pattern designer



AMX Art allows you to create four-colour drawings and diagrams using a variety of graphics tools Operation is very simple using the mouse you control an on-screen pointer Move the pointer to the required tool, click the *Execute* button on the mouse and the pointer changes shape appropriately For example if you select the pencil the pointer becomes a pencil You can then draw lines or free-hand designs

Other tools include an aerosol for spray-painting, boxes and circles – filled or unfilled a paint bucket for selective fills, and a paint-roller An enormous variety of fill patterns is available but if the pre-set designs are not enough you can use the pattern designer program to create your own

Colour is easily selected It somewhat limited Of the four colours available, two must be black and white The other two can be selected from "paint pots" in the upper corners of the screen

A print-dump is provided within the package and this will drive Epson-compatible printers (which is just about every printer these days) A Citizen 120D was used to create the illustrations here The major problem is that backgrounds appear to revert to black, which – apart from any artistic merit – will use up your printer ribbons at a fearsome rate

In addition to the expected functions such as saving and loading of picture files *AMX Art* also allows you to print text in a variety of styles including bold and italics

AMX Art is the kind of program that will appeal to anyone – doodling is a compulsive habit But *AMX Control* will have programmers licking their lips This is the software that reads and acts upon the signals generated by the mouse What makes it so attractive is that it is programmable

The program provides 14 new Basic commands allowing you to create your own graphics-based programs incorporating windows and icons all under mouse control Although the 14 commands appear simple enough, they are extremely flexible, and hence powerful

You can read and set the pointer position under mouse control, read button-clicks on the mouse select and move icons and so on *AMX Control* allocates separate pointers for text and graphics cursors so you can mix text and graphics quite easily too

As if the Basic commands were not sufficient, hard-bitten programmers can use their machine-code programs since the documentation provides all entry points and parameters for the routines

Conclusion

At £69 95 for the complete package, the AMX Mouse represents excellent value for money The combination of hardware and software together with AMS's plans for future support make it the obvious choice for anyone interested in graphics on the 464 664 or 6128

Apart from the possibility of writing your own software for the mouse you can incorporate *AMX Art* pictures in your own programs too What more could you want?

Peter Worlock

Hardware *AMX Mouse* **Micro** Amstrad 464 664 and 6128 **Price** £69 95 **Supplier** Advanced Memory Systems, 166/170 Wilderspool Causeway Warrington WA4 6QA (0925-413501).

Win a top machine with our Word Puzzle

You want prizes? We got prizes Three great machines and 25 top games from Mirrorsoft to be given away in the next few weeks Well what else were you going to do during the summer while the rains pour and England's cricketing humiliation continues apace?

Prizes

First prize is a Commodore 128D with colour monitor At a normal retail price of over £600 the 128D offers excellent sound and graphics 128K of Ram and a built in double-sided disc drive Besides being able to run the massive range of Commodore 64 software the 128D also features CP/M compatibility giving access to many of the best selling business programs

Two runners-up will win Atari 520 STMs – the latest model in Atari's successful ST series The STM can be used with a TV set so the winners will not need to invest in a monitor immediately Because all ST software comes on disc, we've decided to be really kind and throw in a dic drive with the machine

And in a breathtaking display of generosity, we're also offering 25 Mirrorsoft games to the runners-up Commodore 64, Spectrum and Amstrad owners will receive a copy of *Spitfire 40* while BBC owners will get *Strike Force Harrier*

A	H	M	R	T	W	O	F	W
R	U	O	L	O	C	Z	O	H
O	Q	N	T	B	Q	U	O	A
B	O	I	R	A	T	A	W	R
T	O	T	F	M	O	Q	T	D
U	U	O	H	R	P	Q	Z	W
P	Q	R	E	B	M	U	N	A
N	H	Y	C	H	B	I	B	R
I	D	E	W	U	Q	C	O	E

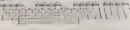
How to enter

This week and in the next two issues, we'll be printing a word grid Each grid contains six words related to microcomputing (for example if the word 'elephant' crops up you can safely ignore it) The words may be written forwards or backwards, up or down (but not diagonally)

Once you've found the words each week hang on to them – there will be a fourth part containing a twist in the tail, together with the entry form Ah, the suspense

Good hunting





CAD-64

The sleek basketwork of a CAD-plotted jet superfighter/interplanetary craft has graced many a whole-wall computer display in sci-fi movies *CAD-64* by Orpheus advertises hidden line display as one of its options, as if the whole visual fascination of CAD were not that you can see through it

Look into the nose and you can see the tail Look into the Death Star and see the throbbing power pack at its heart Hidden lines phooey

But I am not articulating a draftsmanlike point of view Having CAD d your superfighter, you have a right to know what it might look like as it rolls onto the launch pad You want hidden line display graduated shading colour and sleek lines *CAD-64* gives you all these things, excepting only the latter And, to be fair, it only costs around £14 95

CAD s purpose is to allow three-dimensional images (see-through or otherwise) to be built up from precisely specified cross sections and subsequently rotated, stretched shrunk foreshortened added to, modified worked up into a sketch and even animated Created on screen the object (so the idea goes) can have many design problems examined and sorted out long before prototype stage CAD is making inroads into all areas of technical drawing, but that s just the start CAD originals can be subjected to stress analysis for example

It s unlikely that CAD-64 (for reasons which I'll go into) will be used for designing just fighters at least so far as stress analysis goes, although it is certainly capable of drawing them but it could be a great way of getting into the principle of building up three dimensional objects from two-dimensional planes (or 'slices as they are called here), and examining forms and perspective

3-D shading and the full C-64 colour palette is available according to the manual though the program seems to default to shades of grey

Entirely menu- and icon-driven, various sequences click you through the menus as part of the creation process A tutorial sequence building up rotating and animating a cube is in the handbook Starting from a single coordinate you can select the regular figure icon from the *Create* menu moving automatically to the *Amend* menu, from which add a slice is selected for the *Add Slice* menu (the cube needing no actual amendments such as *Stretch*, *Shrink* or *Rubber Band*) in order to define the next cross-section The slice being added puts us back at the *Amend* menu, from which the *View* icon is selected to display the completed figure

Crumpled

To be honest, it looks more like a British Rail sandwich than a cube This inevitable consequence of the monitor s limited resolution improves or deteriorates according to the exact rotation of the figure It doesn t detract from the fun, so long as you are aware of it One of the handbook s strong points is that it uses exact printouts as illustrations but it might have done itself a favour and included one or two more complex constructions in the book to show what can be done

It was a little daunting to see my carefully distanced magnified and rotated cube looking like a crumpled biscuit packet at one point in its travels

Figures can be animated simply by redefining their positions and then running the frames in sequence *Time* and *Restart* options vary the speed and run the sequence indefinitely if desired

I m developing an allergy to icons and my heart sank when I saw 12 separate icon menus, but they are actually easy to learn and use The 'hunt feature for the icon pointer (a moving finger) means time isn t



wasted skidding about homing in counting values up or down gets faster the longer it s held so that large parameter changes can be done quite quickly a joystick is recommended but keyboard commands are perfectly adequate

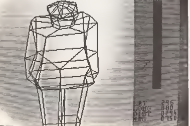
Once you have your figure, the *Edit* menu allows alterations such as adding or deleting bits adding text shading or filling parts of the image or adding patterns The 'doodle icon allows the cursor to act as any one of 96 paintbrushes (one third each for draw invert and erase) 'shade will allow any proportion of pixels to be filled giving a rough and ready graduated shading Another menu allows axes or a grid to be drawn over the screen

Either the finished design, or the full data file, can be saved But for printers, the package bears the warning, *CAD-64* prints to an Epson compatible printer connected via a standard Stack/Centronics type cable to the user port. If you have a different type contact Orpheus in writing, who will try to assist you

There are some silly mistakes in the handbook but nothing lethal there is also (very useful) a glossary which defines precisely the terms the handbook uses

For disc users there is a selection of preprogrammed figures saved for experimentation I am told by one who has tried that his robot appeared very small, upside down and inverted From the people whose co-ordinates can turn a cube into a British Rail sandwich this does not surprise me but it doesn t worry me either because this is a fun package

Helen Armstrong



Program *CAD-64* **Price** £14 95 **Micro** Commodore 64 128 in 64 mode **Supplier** Orphens The Smithy Church Farm Estate Hatley St George Sandy Beds

Software: Reviews

Prospell

I've always looked on *The Word* spell checker from New Star as a Rolls-Royce of a program, very hard to equal almost impossible to better on the advantage of random access disc files available from CP/M but not from the cheesy Amsdos to help speed up the dictionary reading process

I, therefore had some misgivings about *Prospell* from Arnor I needn't have worried Arnor has done it again with another excellent release I wouldn't dare say that it was better than *The Word* but it is as fast, nearly as versatile and it has the distinct attraction to 464/664 owners that you don't need CP/M Plus to run it

Prospell can be used as a stand alone utility – you don't have to have *Protext* to use it, although they superbly complement each other and if you do have *Protext* files can be handled whilst they are in memory on Rom – very useful for correcting errors that you were convinced you knew the correct spelling for

As well as *Protext* documents, *Prospell* will handle plain Ascii or also, very sensibly, *Wordstar* format documents which are so full of control codes and 'hidden eighth bits' that they normally throw other text editors into fits You are supplied with over 40 000 words in the dictionary (on the Rom version about 10,000 of the commonest words are apparently on the chip making it even faster and freeing more disc capacity) You can easily view, add and edit words, delete words you are unlikely to use or build an entirely new dictionary from scratch

Unrecognised words can be corrected, ignored added to the dictionary viewed in context and *Prospell* will also try to look up the word it thinks you meant to spell

An outstanding buy for anyone who uses a word processor – an essential buy for anyone with *Protext*.

Tony Kendle

Program *Prospell* **Micro** Amstrad CPC range **Price** £24 95 disc £34 95 Rom plus disc **Supplier** Arnor Ltd, The Studio, Ledbury Place, Croydon CR0 1ET

Super 3D Plotter

I have always found a good graphics utility fascinating to delve into notably for the chance to actually be able to draw and design in a neat and presentable manner unlike my pen and paper experiments which are usually lamentable

This package for the Atari has a number of extremely useful options a very user-friendly manner and a promise from the author that he has tried to allow the user almost limitless possibilities within the confines of 48K One drawback of this wide open design is the chance of an unexpected bug or two, but the software has been error tested quite extensively and I found no problems

The most attractive option is instant animation, and there are a number of examples on disc for experimentation Once the image is on screen you can rotate it through all three planes zoom in and out, and use true perspective or magnification. In my example (having sat back and admired by handiwork) I had created a vector type 3D cup and by using Hidden Surface Elimination and colour filling turned it into a solid shape with an open end that I could look into or even more inside of

The manual states that whilst in animation, the screen updates at three to six screens per second which is quite fast Obviously, the more complex a design you create the less likely you are to see a nice smooth movement.

If you have a joystick, you can use this program without touching the keyboard. In fact I found using it a positive joy to behold – no messing about, just set simple X,Y,Z coordinates and away!

All three graphics modes can be used but I found more colour and faster animation is available in low-res although obviously a much more detailed image can be created in hi-res, but these modes can be changed simply by pressing the Option key without effecting your screen masterpiece

Thoughout, this package tries to be friendly and indeed the manual is written in a tutorial manner without assuming you have prior knowledge of plotting and, at certain points the author is quick to point out a few limitations in the program which is an honesty sadly lacking in other utilities If you are looking for a comprehensive graphics package, you won't go far wrong here

Andy Moss

Program *Super 3D Plotter II* **Micro** Atari plus disc **Price** £29·99 **Supplier** D+M Software 292 London Road Westcliff-on-Sea, Essex

Flexi File

Flexi File is a powerful and cheap data base (cheap as data bases go) It runs under CP/M and so it is compatible with a wide range of micros The version reviewed was installed for and used on an Amstrad PCW 8256 *Flexi File* has many powerful features, often only seen on data bases at two to three or even more times the cost

One of its most powerful feature is two levels of access There is supervisor access and user access The supervisor can add change or look at data whilst the user can only look at data Both levels are accessed by passwords and the supervisor can change passwords

There are a couple of very restricting things about *Flexi File* Firstly I found the input data screen screen size very limited in area only 80 columns X 17 rows, whereas some of the more expensive data bases have over 100 columns available using a scrolling screen Although the input data screen size is relatively small the report size (output screen) is fairly large (117 columns)

The next minor problem is that you can only have 20 fields, with a maximum length of 80 characters or if it is a key field – the one used for sorting then the maximum length is only 20 characters

The only other problem is the manual, which I would rate as worse than poor It does not tell you nearly enough about using *Flexi File* and although 52 pages may sound detailed it, in fact, lightly skips over or even totally misses out a number of the features of *Flexi File* If you know a little bit about computers then you will find that *Flexi File* is simplicity itself to use but if you aren't too sure about general computer use then the manual's instructions (or lack of them!) can be quite a problem

It's not quite all bad, it does give a glossary section, explaining what all the jargon you may encounter means

But I would hope that this is only a temporary manual and that many of the features will be explained better in a future edition

Apart from these problems I have found that *Flexi File* compares very well with *Cardbox* which costs £99 They both have basically the same features.

Flexi File allows you to have 4 input screens and 8 output (report) screens defined, you can also have 8 selections defined at one time or search on any of 4 key fields The program makes extensive use of cursor menus, making it easy to use even if you've no idea what you're doing

Flexi Write (mentioned in the prices) is a word processor with mail merge facilities linked to *Flexi File* It too uses cursor menus a lot It costs £30 if bought on its own but only £10 if purchased with *Flexi File* (if you have already bought *Flexi File* then *Flexi Write* is still only £10)

Although *Flexi Write* is generally not as good as *LocoScript* as supplied with the 8256 mail merge is a powerful feature and worth £10

David Wallin

Program *Flexi File* **Micro** Any with CP/M+ Installed versions for PCW 8256 CPC 6128 & Others **Price** £39 50 (£48 50 with *Flexi Write*) **Supplier** Saxon Computing 3 St Catherine's Drive Leconfield Beverley, North Humberside HU17 7NT Tel 0401 50697

The French collection

After the US software invasion, an assault is coming from the other direction. Graham Taylor investigates two hot games that have arrived from across the Channel.

There used to be a time when the arrival of software from foreign lands used to signal much hilarity in the office. It was sneeringly assumed that we Brits were the only ones capable of notching up the high scores in the multi player arcade game of software credibility.

Not so now. With Alan Sugar filling the shelves of department stores across Europe with Amstrads of every description (sometimes called Schneiders), it was inevitable that the good stuff from other countries would start filtering back to Blighty.

Ere Informatique began in late 1984, started by two French record company executives. It followed the pattern of most software houses beginning with the ZX81


Get Dexter: Beware the blue pad

moving through the Oric and Spectrum and now devoting most of its attention to the Amstrad. With a flight simulator called *Delta* and a pinball game (released by PSS here) called *Macadam Bumper*, it has



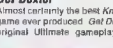
Get Dexter: The professor has a clue

grown to become one of the top five companies in France.

PSS signed a licensing deal with Ere Informatique and has just released two excellent new games from the company – *Crafton & Xunk* (now called *Get Dexter*) and *Eden Blues* (now called *Doomsday Blues*.

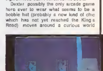
Get Dexter

Almost certainly the best *Knight Lore* style game ever produced. *Get Dexter* takes the original Ultimate gameplay idea of do



whatever you like with anything you can find' and adds very high-res multi-coloured graphics and a stylish graphic design derived from French comic books.

Dexter, possibly the only arcade game hero ever to wear what seems to be a bobble hat (probably a new kind of chic which has not yet reached the King's Road), moves around a curious world


Doomsday Blues

which mixes scientific hi tech – computers and consules – assorted hospital wards and assorted odd objects like bottles of wine and flowers. Each object is beautifully clear – you can almost read the labels on the bottles and count the blooms on the flowers. There is however much method in all this methodness. Things may seem irrelevant but as you play the game you realise everything has a function even

The Dog

Well, maybe it isn't a dog, it acts like a odg but looks like a sort of vacuum cleaner. It

Get Dexter: How to get the bottle?



loome around and follows you when you leave a room You can call it to your side by pressing a key but why would you want to? (See the clues printed below)

Original French inlay

Game objective

Disable a master computer which does all the usual things a master computer can do To disable it you must discover a password different parts of which are known by a series of much backed professors To get the truth out of the professors you need the syringes full of truth serum To get those you need well you get the idea

Playing the game

The first thing is to discover the uses for the various objects scattered about the rooms Some of these affect the countless blue aliens that fill most of the locations Other objects are specifically designed to inhibit the roving punk and the blond nurses (Again see the clues printed below)

Objects may be pushed and pulled picked up and dropped Combinations of these actions and a bit of imagination are needed to get to some of the objects which are located on shelves and ledges around the rooms Some locations are hidden and may be discovered by judicious poking around

Tips on playing

1) Doors are opened by the use of special coloured chips found scattered around the rooms Match the chip colour to the door colour
2) Blond nurses are attracted to flowers
3) Punks like wine
4) Blue aliens don t like bottles of acid dropped on them
5) The frisbee-like objects stop all baddies in their tracks for a short while
6) One of the hidden rooms is behind a wallchart.
7) The dog is useful – you can stand on him for extra height use him as a block against aliens in a tight corner or call him so that he runs over pads you are uncertain about – his electronic bark indicates whether they are safe or not.
8) You can (slightly) control your jump when you run on to a circular jump pad – this facility can be useful
9) The room with the vicious iron gates *is* crossable – with patience

Doomsday Blues

A nicely animated and illustrated strategy game where planning is all It looks like an arcade game, but the skills required to crack it are more refined than first appearances might suggest

Set mostly in a walled prison your objective is to discover the whereabouts of a woman held captive there Getting her involves negotiating a series of robots, and drinking large amounts of coffee

The fully animated central figure is garbed in authentic stripey prison uniform Aside from walking and running, he can manage such sophisticated feats as kicking doors down and dying by means of a ritual dance

Game Objective

To rescue the usual helpless lady prisoner, held captive in a prison run by robots You, too, are a prisoner and must first figure out how to leave your cell The game is played in real time – the colours change as night falls and days are recorded by marks on the prison wall

Your status is represented by three icons indicating current values for strength courage and fitness In order to survive in the game, all of them must be kept high

The means to do this must be discovered, but the coffee helps (for my money you need strength courage and fitness in that order to drink French coffee in the first place but let that pass)

Playing the Game

After escaping from the cell you ll need to map out the doors of the prison fairly carefully Passing through some doors will simply leave you locked in another cell and more energy will have to be expended escaping again Drink of one sort of another is vital so finding some early in the game is essential

Tips on Playing

1) Pay very careful attention to the levels for strength courage and fitness You will notice that one of these runs out very quickly if you enter the vicinity of robots

Doomsday Blues

2) Doors are opened by putting the boot in
3) At night tip-toe quietly past robots and they won t wake
4) Sources of wine and coffee are both found in the cellars which should be discovered early on
5) At the beginning of the game it is probably better to allot more points to strength and courage for door kicking and robot confronting respectability

Doomsday Blues

Both *Get Dexter* and *Doomsday Blues* are available from PSS at £9.95 They are currently only released for the Amstrad, but a Commodore version is certain and a Spectrum version is planned The next game released under the current Ere Informatique licensing deal will be *Contamination* – a arcade/strategy mix dealing with deadly diseases that break out globally. A follow-up to *Get Dexter* is also expected.

Citadel

Citadel could be described as the ultimate arcade adventure for BBC & Electron owners

Written by Michael Jakobsen using Scandinavian programming techniques, *Citadel* boasts impressive full colour graphics and perfectly smooth scrolling

The adventure contains over 100 different screens, each of which have to be skilfully negotiated avoiding the deadly monks and other weird and wonderful creatures which inhabit the castle and its surrounding environs

Extra energy points may be gained by solving the many puzzles encountered in the adventure and by collecting the special energy flasks.

The story line as you'd expect in an adventure of this quality, is a complicated one Each of the locations must be explored in your quest to find five crystals which must then be deposited at the Temple on the Island This activates a teleport system which transports you to the planet Codor You must find a statue there, which when brought back to Earth activates a field of anti-matter, destroying the teleport and Marduk the Dictator's plans to teleport his invasion forces to Earth

An interesting feature of this program allows you to play with either a male or female explorer Your choice however makes no difference as far as the game play is concerned but it's a nice touch

This is a well constructed adventure, featuring a host of special objects, such as trampolines and cannonballs, which can aid you in your quest.

The first adventurer to complete *Citadel* with the maximum 99 points will be rewarded not only with an amazing audio-visual display, but will also be presented with a personally engraved shield and a cheque for £200

Well worth the investment, even if you don't win the prizes

Stuart Low

Program *Citadel* **Micro** BBC/Electron **Price** £9 95 **Supplier** Superior Software Dept C Regent House, Skinner Lane Leeds LS7 1AX

Phantom Asteroid

It's funny isn't it how at one time any program that sold for under two quid was labelled as an essential purchase as long as it had some decent graphics and a few jolly tunes

Enter Mastertronic which has spoilt us with so many excellent releases, that anything so-so is now looked upon with disdain

So it goes for this game, which really has some rather ordinary Rob Hubbard sound, (which is quite good by any other standards) a very thin plot, and colour which isn't really up to much

The story concerns an asteroid which is hurtling towards Earth and has you as a sort of *Jet Man*-like character having to wander around its maze-like interior, in order to collect 36 uranium cubes which as usual are scattered somewhere around the place

The usual motley crew of monsters abound which are very nicely presented and can be bumped off with the standard issue zapp gun

The sting in the tail in this game is that after collecting your cubes, you have five minutes to get off before the whole thing explodes and goes up in flames!

Although certainly not a classic Mastertronic release there's enough action in here to keep you busy for a while, without burning a hole in your pocket

Andy Moss

Program *The Phantom Asteroid* **Micro** Commodore 64 **Price** £1 99 **Supplier** Mastertronic 8-10 Paul Street, London EC2.

Time of the End

Time of the End is the first text-only adventure from, so far as I know, a new company If the quality is maintained as high on future games as found in this one, I doubt if they will remain unknown for long

The theme of the game is not very original but what makes this adventure rise above others is a cleverly woven plot which both amuses and baffles you from the first location

Unfortunately Earth is in trouble again, this time from a bunch of very nasty, bored Aliens It would appear that their form of enjoyment is to cause endless problems for our poor old planet this comes in the form of earthquakes, tidal waves and other so-called 'freaks' of nature

Out for an evening a stroll you are suddenly transported to the Aliens planet and learn what you must do to save the Earth On your return, you discover you have been changed oddly enough into a bird so your first task is to resume human form

Various characters will help you throughout your mission and you will even meet the original Kilroy, of graffiti fame, it seems he's been trying to warn the earth about the Aliens for some time but nobody took any notice

Keith Mitner, who wrote the adventure, seems to have worked out all the different answers to your verb/noun input and very funny they are too All in all an excellent adventure, not very difficult, but it should keep the ardent gamester busy for a fair while

A sequel is promised and I for one look forward to it

Roger Garrett

Program *Time Of The End* **Micro** Spectrum 48K **Price** £3 95 **Supplier** Mandarin Adventures, 14 Langton Close Woking, Surrey GU21 3QJ

Classroom chaos

Holy St. Trinians! Someone's nicked the schools Challenge Cup and the Head thinks it's you Cripes, the only way out is to find the person who did the ugly deed and clear your name before Head catches you!

No this is not another dubious epic from St. Brides but a school girl jape from pretenders to the Mastertronic throne – Atlantis

This is a very witty and enjoyable romp set in a mad-cap school for girls. As this is a *Quilled* Budget priced adventure it's an absolute must for anyone who likes their adventures less po-faced and pixie orientated but still enjoys solving complex puzzles – all for a couple of pounds

The whole game is beautifully set out for you in the opening screens with crazy characters like Swotty Noell Miss Hassle and Mr Potts introducing themselves to you and then going about their business and sometimes returning for a further chat

There is a graphic a quarter screen in size for each location which is drawn instantly and below which the text scrolls There are some neat touches like a small cup design instead of a cursor and the imaginative use of colour – very tasteful An adventure which is easy to map, very user friendly and very funny!

Teachers almost always mean danger, though some may offer indirect clues Be wary of Miss Birch who will grab you by the ear and ask a question – get it wrong and it's off to the adjustment room with you to cool off

In fact if any of the teachers find you, you will be asked an on the spot question, usually based on General History – keep some reference books handy – you'll need them!

Although humour runs throughout this adventure, solving it is no easy feat and I fear it will take many save and loads before the truth will out The key seems to be the playground – there you will find cryptic information about the whereabouts of the missing cup

I thoroughly enjoyed the game and recommend it.

Andy Moss

Program *Classroom Chaos* **Micro** Spectrum **Price** £1 99 **Supplier** Central Solutions 500 Chesham House 150 Regent St., London W1



Special release

We continue this week with Christopher Haster's tips for the excellent *Mercenary* from Novogen You may remember that we left you last week with details of the types of ships available Chris continues with tips on how to use one of the features of the game to your own advantage

"Now for some advanced tricks it says in the instructions that *Ctrl-O* will place you near a city building and give you a new ship if you crash the old one far away from the city it also says that the price of this is that any objects you are carrying will be scattered about While this is true, and it is not too difficult to fly over the city and retrieve the scattered objects the best idea is to drop every object *before* you press *Ctrl-O* so you aren't carrying any and so none can be scattered You just climb into your new ship after pressing *Ctrl-O* and pick the objects up again

'Now here's an amazing fact you can *return* to Targ (the planet you wish to escape from) after you have escaped Normally to finish the game you either buy or steal the Intergalactic Craft and the view switches to all stars and then the author congratulates you on escaping The game then says 'Game Over' in an infinite loop You are stuck out in space now Or are you? Remember what to do if you go too far from the city? Simply press *Ctrl-O* again (even though you are out in space) and you will be back in the city You can then play the game as much as you like, the only difference being that it keeps saying Game Over You could get more objects explore or whatever

However, to make this effective you must again *drop* all objects before hitting *Ctrl-O* and even though you are out in space you will hear them drop They cannot be retaken, but that doesn't matter as you need to drop them to stop them being scattered randomly when you press *Ctrl-O* Also you need to press 'L first to leave the ship Then press *Ctrl-Q* and you will see the city again You will be in a new ship so press *L* again to leave this and you will find that all your objects will be there in front of you If you climb back into the Intergalactic Craft, you go straight back into space and the procedure can be repeated indefinitely – flicking between space and the city Consequently, there is never a Game Over – you can continue to play Here are the last few tricks

For an amazing set of messages don t buy the ship at the start of the game and leave the game running – don t even move the joystick. These messages are quite funny but they stop when you see Where Are You on screen For more amusing messages move the joystick 'Ah! You're back!' says the computer

'Finally a trick with the lifts When you are going up from the hangar drop an object whilst you can still see the hangar walls When you go back down in the lift you should see it hung from the ceiling and you can walk underneath it. Good for a laugh! I think that s all There are actually still some objects that I have found no use for

Many thanks for those very comprehensive tips, Chris now we have to look forward to the promised *Mercenary 2* (with visits to several planets) and maybe conversions for some different computers

I was recently having an interesting conversation with David Jones, the talented author of the Mastertronic *Finders Keepers/Spellbound* series – easily the best value games around providing superb quality at a bargain price Well it looks like they are soon going to be even better

David tells me that his next game, featuring the same Magic Knight character (but apparently set on a spaceship!) will be a 128K special – out first on the new Spectrum 128K Amstrad, 128K Commodore and Atari versions should also appear A cut down version will also appear later for the small memory models of those machines David has also hinted that there may be a special release of 128K versions of *Spellbound*

The latter game has prompted a string of letters asking for help and as far as I can tell no one has finished the game yet. You will be pleased to hear that David has promised us some tips for the game very soon

Anyway, for those that can t wait you will be pleased to cast your eyes over this crop of pokes for the Spectrum from Paul Miller, starting with *Spellbound* of course It won't help you solve the puzzles, but it will mean you survive long enough to try to find the answer

Spellbound – Spectrum
Type in *Clear 26000* Then *Load "" Code* Start the tape When the game has loaded use the following *Poke 27871 0* (stops strength loss walking) *Poke 36133,0* (stops strength loss in the odd ballroom) To run the game enter *Randomize Usr 26643* as a direct command

Sir Fred
Make sure Sir Fred is sitting down, then press Symbol Shift D and P At the same time you should hear a scream from your computer and then away you go with extra lives

(Just a note here – you may have seen the Amstrad version of *Sir Fred* reviewed in other magazines but in fact Mikro-Gen says that it isn t planning to release the game unless the Spanish authors can fix some bugs in the program)

Rocky Horror Show Spectrum
For unlimited time, use the following program

```
10 CLEAR 65000
20 LOAD "" Code
30 Poke 65310,205: Poke
   65311,211: Poke 65312,
   255
40 FOR A=65491 TO 65498:
   READ B: Poke A,B:
   NEXT A
50 RANDOMIZE USR 65281
100 DATA 62,0,50,181,190,
    195,190,131
```

Saboteur – Spectrum
For unlimited energy and time, load the game with this program

```
10 CLEAR 25200

20 LOAD "" Screen$

30 LOAD ""

40 Poke 27894,0: Poke 46998,0

50 RANDOMIZE USR 63972
```

Robin O' The Wood
Merge the leader then enter the line **1035** *Poke 49911 00* Now enter *Goto 1000* for infinite lives

Rockman
Level E 1st Code ONYX
Level I 2nd Code GURU
Level L 3rd Code SAGE
Level F 4th Code CLAW

XCEL – Spectrum
This program gives 255 lives and you start from the place you die

```
10 CLEAR 23999: LOAD ""
   Code
20 Poke 65031,205: Poke
   65032,192: Poke 65033,254
30 FOR A=65216 TO 65228:
   READ B: Poke A,B: NEXT A
40 RANDOMIZE USR 65000
100 DATA 62,255,50,148,
    155,62,0,50,157,180,
    195,160,154
```

That's all for this week – see you soon

Tony Kendle

Sudden death

First this week a couple of addresses that I failed to mention Automata, whose 10-pack I discussed in Volume 5, No 10, is to be found at PO Box 78 Southsea, Hants PO4 9SL. Camel Micros whose Camel Adventure Club I looked at the following week, is at Wellpark Willeys Avenue, Exeter EX2 8BE

Nemesis The Adventure Begins' comes from Alchemist, and is for the QL. There isn't a great deal of adventure software around for the QL as you'll be aware so each new game released comes in for quite a bit of scrutiny The first thing to strike the attention here is the great loading screen depicting a spaceship hurtling through space toward some epic confrontation

The adventure comes on two cartridges, the main loading program being on Number One and the game data and loading screen on Two Surprisingly in view of the commendably fast response time *Nemesis* is written in Superbasic but even typing in something deliberately confusing doesn't slow things down

The screen layout stays the same throughout the proceedings, as far as I know green text on black paper, with a pretty surrounding pattern Location descriptions are long and contribute to the atmosphere The first location, for example You sit at the helm of the small landing pod that transported you down to the planet's surface from your orbiting ship You are dressed in leather trousers and jacket, leather boots and a light cotton shirt.

Input is depicted in white with a flashing red cursor You carry a blaster a knife and a food pill The punctuation and grammar are both a bit weird although the spelling seems OK as far as I've gone with just a couple of silly errors which have obviously been overlooked in play-testing Why adventure authors can't give the program to a number of independent testers, I don't know as it's only too easy for the writer to consistently miss errors There is also the occasional wrong tense, the adventure takes place in the present ('You are in' "You have arrived etc) then suddenly we get for example 'Exclaimed the woodsman'

The program doesn't accept multiple commands although there is full-sentence parsing (effectively the old 'Verb-Noun construction is the best way to proceed) But the QL's type-ahead buffer means that if the player knows the way around several commands can be typed in while the computer is displaying the response to previous commands

A TALE OF KEROVNIA

Right at the start the player will find a nice suspenseful problem standing on a bridge is a robot which summarily kills you if you attempt to cross You can't scramble down the ravine (same result) and you need something that is over that bridge Going off in another direction you'll be able to explore a few locations, but unfortunately, among the ruins of the ancient city are bloodthirsty mutant somethings only too willing to finish you off There *is* a way to avoid them of course but as you might imagine the necessary object is over that bridge!

This is the free clue for this week near the bridge your feet crunch across gravel on the road, so *Throw gravel into ravine*, whereupon the robot will run off to investigate leaving you free to cross the bridge – however the robot quickly realises your ploy and runs back to the bridge Quick how to stop the robot from blasting you? Wouldn't you like to know? I can't give it all away yet! The problems are quite often of the Do this sequence of actions in precisely the right order and with exactly the right timing in order to escape the dreaded creatures with burning red eyes" and so on A bit frustrating

It's very rewarding when you finally work out how to get past a certain situation but it can also be frustrating finding your way until the right sequence of commands can be worked out A saving grace of the game is that there is at least plenty of other avenues to be explored each of which, though being a dead end with sudden death

Save can be achieved, but only one position to each cartridge and the booklet supplied doesn't tell you that saving will be carried out straight away on Drive No1 You'll need to save regularly however, as there is possibly a bit too much sudden death though there is usually ample warning of impending doom in the descriptions Maybe a RamSave feature would be useful here

Alchemist otherwise Paul Brittain and John Lovett, tell me that the adventure took eight months and many liquid lunches to complete certainly, there does seem to be a shortage of the usual adventure cliches (apart from the response to *Help* – That was a song by the Beatles wasn't it?') with a corresponding air of originality which makes *Nemesis* quite addictive

I found *The Pawn*, from Magnetic Scrolls via Sinclair, quite entertaining and its recent appearance on the Atari ST has had a quite stunning effect on better scribes than me (the exclamation mark key must be hot to the touch!) but in the end, I think I prefer the more prosaic charms of *Nemesis* and its like One thing I cannot bear is entertainment that takes itself too seriously

In short, Nemesis is excellent value at just £13 95 and an adventure that should be in every adventure-starved QL owner's collection Alchemist, 5 Forster Street, Gainsborough Lincs DN21 2LL

Tony Bridge

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Games: New Releases

Graham Taylor looks through this week's new arrivals

Program *Green Beret* **Type** Arcade **Machine** Amstrad **Price** £8 95 **Supplier** Imagine Software, 6 Central St, Manchester M2 5NS

Program *Starquake* **Type** Arcade **Machine** Amstrad **Price** £8 95 **Supplier** Bubble Bus, 87 High Street Tonbridge Kent TN19 1RX

Program *AMX Pagemaker* **Type** Utility **Machine** Amstrad **Price** £14 95 **Supplier** Advanced Memory Systems, Green Lane, Appleton, Warrington WA4 5NG

Program *Kikstart* **Type** Arcade **Machine** Atari **Price** £1 99 **Supplier** Mastertonic 8-10 Paul Street London W1R 7DB

Program *Vegas Jackpot* **Type** Strategy **Machine** Atari **Price** £1 99 **Supplier** Mastertronic as above

Program *Which Compound?* **Type** Educational **Machine** BBC **Price** £10 50 **Supplier** Cloud 9 4 Dolvin Road, Tavistock Devon PL19 9EA

Program *Tennis* **Type** Strategy **Machine** BBC **Price** £2 99 **Supplier** Bug Byte, Liberty House, 222 Regent Street, London W1R 7DE

Program *Bandits at Zero* **Type** Arcade **Machine** C16 **Price** £2 99 **Supplier** Mastertronic, as above

Program *Kikstart* **Type** Arcade **Machine** C16 **Price** £1 99 **Supplier** Mastertronic, as above

Program *Solo* **Type** Arcade **Machine** C16 **Price** £2 99 **Supplier** Bug Byte, as above

Program *Spellbound* **Type** Arcade **Machine** C64 **Price** £2 99 **Supplier** Mastertronic, as above

Program *Formula 1 Simulator* **Type** Strategy **Machine** C64 **Price** £1 99 **Supplier** Mastertronic as above

Program *Green Beret* **Type** Arcade **Machine** C64 **Price** £8 95 **Supplier** Imagine, as above

Program *Turmoil* **Type** Arcade **Machine** MSX **Price** £2 99 **Supplier** Bug Byte as above

Program *Starstrike II* **Type** Arcade **Machine** Spectrum **Price** £7 95 **Supplier** Real Time Software, Prospect House, 32 Sovereign Street, Leeds LS1 4BT

Program *Spy Trilogy* **Type** Adventure **Machine** Spectrum **Price** £2 50 **Supplier** Tartan Software, 61 Baillie Norrie Court, Montrose Angus DD10 9DT

Program *Max Headroom* **Type** Arcade **Micro** Spectrum **Price** £8 95 **Supplier** Quicksilva Liberty House 222 Regent Street, London W1R 7DB

Max Headroom, the only computer game ever to be based on a running gag, is a lot better than I expected Obviously what everybody wants to see is Max Headroom on their very own computer You don t or at least you don't until the very end when as a reward for succeeding, Max pops up and congratulates you The effect is fair to middling

The game though is rather entertaining and is based around the plot of the original Max Headroom TV film rather than the video shows Basically it s an icon driven (a few minus marks for that) strategy/arcade game where you have to find a series of codes in order to reach and steal a module that represents the very being of Max The module is held on the top floor of the Zik Zak Corporation building

The main play of the game is to hunt the various floors of the building searching for segments of codes This in turn involves discovering codes to control the lift

The screen is divided into the icons which represent the various commands available and a 3D view of each room The graphics are fairly small, mostly single colour

The rest of the game is down to vaguely Simon -like puzzles – to find the code to unlock the doors you have to remember and repeat backwards a five or six note tune

It s all quite entertaining, though I think some people will crack it in a few hours and it really won t set the computing world afire Still, it s original enough whilst it lasts

Pick of the week

The Pawn

Program *The Pawn* **Type** Adventure **Micro** Atari ST **Price** £24 95 **Supplier** Rainbird Software Wellington House Upper St Martin s Lane London WC2H 9DL

Pixias and I have never seen eye to eye or even eye to kneecap Mostly when confronted with the option of undertaking even the simplest quest, like getting back the lost credit card of Barclay and returning it to Queen Deirdre with or on behalf of anything mythological furry mystic or in any way anything other than completely real, I ll go for the default of staying at home with a cup of tea anytime

Not so with *The Pawn*, however A verifiable tribe of mystic beings in the first few locations and here I am battling on seeking keys talking to gurus who merely laugh at me, dealing in foreign Indeed archaic currencies (how many groats to the gold nugget?) and generally mixing it with the very peculiar inhabitants of Kerovnia

What makes all this pixie stuff acceptable are the touches (well dollops actually) of humour deviousness of plot cleverness of design and beauty of presentation Basic game options like save and load display graphics long/short/verbose text etc are presented as a series of pull down scrolls manipulated by mouse

It s these sort of touches that make *The Pawn* the pixie basher par excellence, that and a text parser that exceeds even Infocom in its sophistication

The plot? Well there is this 44 page story chock full of pixies, dwarves and princesses – then there are these sub quests offered to you on a freelance basis as you progress, but the ultimate point is to escape from Kerovnia.

But who knows? You may not want to

Program *Green Beret* **Type** Arcade **Machine** Spectrum **Price** £7 95 **Supplier** Imagine, as above

Program *Paperround* **Type** Arcade **Machine** Spectrum **Price** £2.99 **Supplier** E Marchant 21 barton Knowle, Belper, Derbyshire

Program *Sodov the Sorcerer* **Type** Arcade **Machine** Spectrum **Price** £2 99 **Supplier** Bug Byte as above

Program *Ticket to Ride* **Type** Arcade **Machine** Spectrum **Price** £1 99 **Supplier** Mastertronic, as above

Program *Adventure Building System* **Type** Utility **Machine** Spectrum **Price** £4 50 **Supplier** Tartan Software as above

Program *Samantha Fox Strip Poker* **Type** Strategy **Micro** Spectrum/Amstrad **Price** £8 95 **Supplier** Martech House, Bay Terrace Pevensey Bay East Sussex BN24 6EE.

Strip Poker programs sell surprisingly well Ordinary poker programs sell quite badly What does this tell us? People like naked pixels *Samantha Fox Strip Poker* features not just any old naked pixels but Samantha Fox s naked pixels as presented on a series of digitised pictures Curiously enough, the Spectrum screen res on black and white digitised images produces an end result about as good as a smudged copy of

the *Sun*

The poker game is, however very good On the Samantha side you play Seven Card Stud against her alone on the B side you play against up to three other opponents each with their own playing/bluffing style On both sides of the tape clever artificial intelligence techniques are used to enable the computer to learn from your playing style

The graphics are rather neat (the ones of the cards idiot) with clear display and a colour system to show which of your cards the computer can actually see Seven Card Stud is a rather complicated game with devious rules about how much you may raise at any point but the computer tells you what your options are – amounts you can raise are fixed

When the excitement of seeing Samantha Fox with hardly any black pixels at all has worn off, you ll find you're left with an excellent poker game For that it's worth £8 95

Program *Compaedia* **Type** Utility **Machine** Dr Studwick **Price** £5 **Supplier** Dr Studwick 5 Badlesmere Road Eastbourne BN22 8TL

Program *Bounces* **Price** £9 95 **Micro** Spectrum/Commodore **Supplier** Beyond, Wellington House Upper St Martin s Lane London

Bounces is an odd game – a form of two player combat involving capturing and than shooting a bouncing ball into slots in the oppponent s side of the screen

Bizarre elements abound the fact that players are not only dressed in what looks like a medieval battle regalia but also are attached to the wall of their side of the screen by what appears to be an elastic band, being good evidence of this

The most astonishing part of all this is that *Bounces* is a very entertaining game The game elements fit together very neatly – the ball bounces around the screen you try to catch it, aim as best you can and fire it in one more or less continuous movement To stand any hope of (deliberately) getting it in one of the slots in your opponent s side you have to pull against the rubber and stretch over to his side of the court – if you miss the ball is likely to end up behind you and you find yourself sliding backwards as your tension against the rubber band is dissipated Suffice to say you spend a lot of time collapsed in a heap against the back wall

The Spectrum version has nicely detailed single colour graphics for the central players but little else by way of graphic interest while the Commodore edition has smaller multi-coloured figures but the other details like the scoreboard are considerably improved It has better sound as well naturally

This would have made an astounding budget title but as it is I m not sure about that whopping £9 95 price tag It isn't justified by the usual criteria of multi screen icon controlled wizz bang everything including the kitchen sink It may be justified in terms of orginality and pure fun-to-playness – certainly the office was much taken with it. Definitely one to see and play first before you buy Hang on a bit though – it isn t out officially until May

Program *Taspro Three* **Type** Utility **Machine** Spectrum **Price** £5 95 **Supplier** Seven Stars Publishing 34 Squirrel Rise Marlow Bucks SL7 3PN

Program *gBase* **Price** £7 99 **Micro** Commodore 64 **Supplier** Bug Byte, Liberty House, 22 Regent Street London W1R 7DB

Bug Byte is currently marketing a range of budget-priced disc software for the Commodore 64 The titles are all top US sellers and are marked not only for their cheapness, but also for the fact that they claim no manual required It s a significant claim because all the titles are utilities claim because all the titles are utilities some of them quite sophisticated like wordprocessors and databases

A cheap database that doesn t need a manual? Could it be true? *gBase* (not a sneaky reference to *dBase* surely) allows 600 records on each file and the facility to search through your data with as many fields as you want

A 600 record maximum (the whole thing has to be stored on a single disc) isn t very large by commercial standards (tiny in fact) Nevertheless it should be enough for those people likely to buy this sort of package – the general home user

The program is easy to use that no manual claim is slightly misleading since the manual is actually on disc – called up where required by using a help key option Nevertheless the basic point is true the program is very easy to use, partly because it is so simple

This is a no frills database it'll do just enough to be useful but no more The £7 99 price tag in this country isn't quite as budget as the few dollars these packages cost in the US, but it is cheap nevertheless Treat *gBase* as a sort of novice s introduction to databases and you won t be disappointed It should do well

Program *Doomdark s Revenge* **Type** Strategy **Machine** C64 **Price** £9 95 **Supplier** Beyond Wellington House Upper St Martins Lane, London WC2U 9DL

Doomdark s Revenge has after many months delay, since the Spectrum version been released for the Commodore 64 The Spectrum edition was regarded as a worthy successor to *Lords of Midnight*, offering a greater and more adventure orientated challenge Indeed even creator Mike Singleton said recently in *Popular s* Codewords that he had not yet managed a barnstorming victory over the computerised forces of darkness

The mark of an addictive adventure or strategy game is amongst other things a playing system sufficiently flexible to allow a wide variety of winning gambits There is no one winning solution to Doomdark, although powerful strategies can and must be developed Not only are there people places and objects to be discovered as in conventional adventures but forces must be mustered (mustering only ever seems to happen in fantasy games)



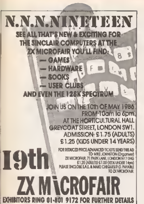
Doomdark s Revenge concerns the attempt by a group of assorted goodies under your command to rescue the unfortunate Morking (ex-hero) who is now prisoner of the unambiguously named Shareth Heartsteeler, Empress of the Frozen Empire.

Even the concept of winning in the game is not fixed a nominal win is achieved by getting Luxor the Moonprince (and possible household detergent) to Morkin before Shareth can top him Then Luxor and Morkin must escape to freedom through the Gate of Varenon There is however, a more difficult choice – to destroy Shareth s power forever That of course wins the big bucks

The classic Singleton perspective true graphics for every location (of which there are thousands) are here in all their beauty, as are a few new features like interiors for some buildings

All instructions are single keypress while commands are extended beyond those in *Midnight*, particularly in terms of status checks

Essentially the Commodore version of *Doomdark* replicates exactly the Spectrum original There is, however, one new touch in the packaging Instead of the tedious book you can now hear the background story of the game on a 99 minute audio cassette



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All figures compiled by Gallup/Microscope

Top Twenty

1	(–)	Superbowl *(Spectrum/ C64/ MSX)*	Ocean
2	(–)	Green Beret *(Spectrum)*	Imagine
3	(1)	Way of the Tiger *(Spectrum/ Amstrad/ MSX)*	Gremlin Graphics
4	(–)	Bomb Jack *(Spectrum)*	Elite
5	(2)	Ping Pong *(Various)*	Imagine
6	(–)	Last V8 *(C64/ Amstrad/ Atari)*	Mastertronic
7	(4)	Uridium *(C64)*	Hewson Consultants
8	(–)	Commando *(Spectrum/ C64/ C16)*	Elite
9	(12)	F A Cup Football *(Spectrum/ C64?Amstrad)*	Virgin
10	(11)	One Man And His Droid *(Various)*	Mastertronic
11	(3)	Yie Ar Kung Fu *(Various*	Imagine
12	(–)	Action Biker *(Various)*	Mastertronic
13	(13)	Rambo *(Spectrum/ Amstrad/ C64)*	Ocean
14	(7)	Computer Hits 10 (2) *(Various)*	Beau Jolly
15	(6)	Formula One Simulator *(Various)*	Mastertronic
16	(–)	Computer Hits 10 (1) *(Various)*	Beau Jolly
17	(9)	Turbo Esprit *(Spectrum)*	Durell
18	(16)	Hardball *(C64)*	US Gold
19	(–)	BMX Racers *(Spectrum/ C64/ C16/ Amstrad)*	Mastertronic
20	(15)	Winter Olympics *(BBC/ Electron/ C16)*	Tynesoft

Figures compiled by Gallup/Microscope

Readers' Chart No 69

1	(1)	Elite *(Spectrum/ C64/ Amstrad/ BBC)*	Acornsoft/Firebird
2	(5)	Uridium *(C64)*	Hewson
3	(2)	Movie *(Spectrum)*	Imagine
4	(3)	Lord of the Rings *(Spectrum/ C64/ Amstrad)*	Melbourne House
5	(7)	Commando *(Spectrum/ C64/ C16)*	Elite
6	(4)	Yie Ar Kung Fu *(Spectrum/ C64/ Amstrad/ BBC/ MSX)*	Imagine
7	(6)	Swords and Sorcery *(Spectrum/ Amstrad)*	PSS
8	(8)	Spellbound *(Spectrum/ Amstrad)*	Mastertronic
9	(9)	Winter Games *(Spectrum/ C64/ Amstrad)*	Epyx/US Gold
10	(–)	Hardball *(C64)*	US Gold

Winning Phrase No 69: "Fun to go," cried Ken", from Colin Tham of Barkingside in Essex, who wins £25. Honourable mentions go to B. McCarthy of Newark for "Amiga – money locked in future", and Philip Arkley, of Accrington Lancs for "Ocean game un time! Uur?"

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Voting for week 71 closes at 2pm on Wednesday April 16, 1986. Entries received after that time will not be eligible for inclusion in that week's voting. The judges decision is final. Only one entry per individual per week will be allowed.

Name ....

Address ....

....

....

My top 3: Voting Week 71

1..

2..

3..

My phrase is: ....

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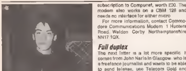
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Modem advice

This week I'll try to answer some of the many letters you have sent in I have received many queries from people wanting advice as to which modem to purchase for their particular machine

Firstly, Peter Pendergast of Bellshouston Glasgow, wrote asking which is best for the Atari 130XE the WS 2000 and Multiview Terminal software or the Voyager 11/Voyager 7 and software

Well, Peter, both are great value about the same price and offer the same features For other readers in a similar position, the Voyager 11 has 300/300 1200/75 75/1200 full duplex and 1200/1200 half duplex, autodial autoanswer and has options for 1200/1200 full duplex, bell tones and auto baud rate scan

The WS 2000 has 300/300, 1200/75, 75/1200 full duplex and 600/600 1200/1200 half duplex and bell tones as standard, autodial/autoanswer are available as an extra for £30 each I have never actually used a WS 2000 but from what I've heard it is very good

The Voyager 11 on the other hand I have used and I find it first rate The 11 is simple to use and has only one dial to be seen

The WS, though, has three and looks a little more complex to use In the end it all depends on the software and since I ve never used a 130XE for comms I don t know much about its software

No interface

On the hardware side, I would advise the Voyager 11, you get more features for a little less money The Voyager is £99 95 excluding VAT, whereas the WS2000 is £108 95 excluding VAT The Voyager 11 is manufactured by Modem House 70 Longbrook Street, Exeter, Devon EX4 7AP tel (0392) 213355

The WS 200 is from Miracle Technology (UK) Ltd St Peters Street, Ipswich IP1 1XB tel (0473) 50304

The next letter was from J Driscall of Middlesex who owns a CBM 64 Mr Driscall was worried about whether he could use a Compunet modem for Micronet 800 and a Micronet modem on Compunet. You can! The best one for this is probably the Commodore modem it costs only £79 99 and includes a free subscription to Compunet, worth £30. The modem also works on a CBM 128 and needs no interface for either micro

For more information, contact Commodore Communications Modem 1 Hunters Road Weldon Corby Northamptonshire NN17 1QX.

Full duplex

The next letter is a lot more specific It comes from John Narin in Glasgow who is a freelance journalist and wants to be able to send telexes, use Telecom Gold and send things direct to newspapers The requirements were that the modem must be small, portable and battery powered

Two suitable modems are the 700B and the KN 300 Both are 300/300 full duplex only, acoustic and very small Being acoustic though you need a phone with round ear/mouth pieces The 700B from Bencom will run for 10 hours per charge and has a phone presence sensor to detect if the modem is connected to a phone, to prevent it being left on and draining the batteries

It costs £199 and more expensive models with more features are available The KN 300 costs a little less at only £180 The KN 300 is made by K&N electronics tel (0628) 22447 The 700B is made by Bencom Sendata Communications, Drayton Nouse Gordon Street, London WC1H 0AW, tel 01-387 7792

John Narin was also interested in higher speed, mains hardwired modems You might try the WS 2000 and the Voyager 11 There is also the WS 3000 range and the Voyager 4000

For a high quality modem try Tandata The Tm512, which I have used, is not just a modem, it has its own microprocessor built in and you can program it which lets you autodial amongst other things from any micro

It also has a memory of eight numbers It works at 300/300 1200/75, 75/1200 full duplex and 1200/1200 half duplex, has auto dial and answer bell tones optional and also has an on/off switch which is one of the most useful things on a modem It may sound expensive at £295 excluding VAT, but is worth it because of all its features Look out for a review in *Popular Computing Weekly* in the near future

Another modem from Tandata is the 602 which costs a cool £455, again it has loads of features including all the 512's speeds and 1200/1200 full duplex Tandata Marketing are in Albert Road North Malvern, Worcs WR14 2TL tel (06845) 68421 Apologies to Tandata for a minor mistake at the start of the series The Tm 110 is autodial 1200/75 only

Character set

The next letter wants to know not only what modem but what micro to buy! Ted Schama from Wallingford wrote asking which of these two micros are best for comms a Spectrum or an Amstrad My choice is the Amstrad My reasons include the fact that an 80 column screen is available and Prestel emulation is easier than on a Spectrum Ideally the BBC is even better as it has Mode 7 which is Prestel graphics

For a BBC I advise the Le Modem from Watford Electronics For the Amstrad (or Spectrum or BBC) then the Voyager is as good as any in fact it s better than most.

One quick answer to Roger Bibby of Cheshire I think your problem was dealt with the other week (27 March-2 april) when I explained about Viewdata format

Now to totally change the subject Mr Peter Holt of Glasgow is trying to start his own BB Firstly good luck Peter you ll need it! I know nothing about the QL s character set I'm afraid and I know of no QL Bulletin Boards either To get the relevant information I would try to find a QL sig on a BB and leave a message

I will as Peter suggested in the future, devote a few weeks to starting a BB For a list of the Prestel characters though look in the Spectrum Micronet Book

Board access

The last letter for help was from Mr Smith of Nottingham who has been having problems with his Commodore 64 modem Maplin Interface and software The only answer I can give is to use the modem at 8 bit no parity and 1½-2 stop bits

You could also try changing line 260 to

```
260 S$=CHR$(ASC(S$)+n) PRINT #200,
etc
```

and add 125

```
125 A$+CHR$(ASC(A$)+n)
```

where n is any number you like (fairly low and may be negative)

I've also heard that the software supplied with the interface is only suitable for access to the Maplin Bulletin Board – this may be your problem Check that the interface is OK

If any others out there use a CBM 64 and Maplin's interface then I would be most interested to hear from you

Keyword search

Lastly a letter was sent in by G Worsley He wanted me to bring your attention to Spellst Viewdata Bulletin Board It has about 500 pages at the moment It has the advantage over all other viewdata boards in that it has *keyword* searching! It has six main sections – Health, Education Business, Leisure, Services and Travel It has been undergoing tests tests and more tests, recently so it should all work perfectly

The number is Ashford (Middx) 44558, it's 24 hours a day and 1200/75 baud viewdata format There are no passwords needed, so give it a try

David Wallin

If you have any queries tips or comments to make about any aspect of micro communications David Wallin would love to hear from you

Write to him at *Popular Computing Weekly* 12-13 Little Newport Street London WC2H 7PP



TOOLBOX

by Paul Murray

This week sees the first part of a vast suite of utility programs for your Spectrum The suite is written in machine code and represents a number of utilities and facilities that can make life a great deal easier for the serious programmer using Sinclair Basic

The most vital part of the process is the Basic loader program This is Program One printed this week but it will be required by all the other parts, so don t lose it!

The loader program prompts you to enter the start and finish address for each set of machine code bytes that you have to input After this you have to enter five bytes per line so that the output on screen should exactly mirror that in the printed listing

At the end of the addresses there is a checksum so that you can check your input against the correct value printed at the foot of the listing

Each routine listing is complete within itself and is printed in columns of five bytes following an address You only need to enter the first and last addresses into the loader program as the others will be printed to prompt you to input the bytes, five at a time

Once you have loaded all the bytes and the checksum is correct you need to save the code using the *Save* bytes command

This week – we are printing the routines for two utilities – Compact and Trace

Compact

Reduces the amount of memory occupied by a program by arranging for program lines to contain as many statements as

Basic Loader

```
10 CLEAR 61900
20 INPUT "STARTING ADDRESS >";START
30 INPUT "FINISHING ADDRESS >";FINISH
40 LET TOTAL=0
50 FOR N=START TO FINISH
60 PRINT N;
70 FOR M=N TO N+4
80 INPUT BYTE
90 PRINT TAB ((M-N+1)*5+2);BYTE;
100 LET TOTAL=TOTAL+BYTE
110 POKE M,BYTE
120 NEXT M
130 PRINT
140 NEXT N
150 PRINT
160 PRINT "CHECKSUM=";TOTAL
170 STOP
```

Compact

62000	[illegible]	0	64	34	46
62005	242	17	1	64	1
62010	255	23	54	0	237
62015	176	42	83	92	17
62020	64	1	213	229	167
62025	205	136	25	56	122
62030	35	126	254	250	202
62035	96	243	254	234	202
62040	96	243	254	237	40
62045	17	254	236	40	13
62050	254	247	40	9	254
62055	229	40	5	225	209
62060	20	24	215	35	126
62065	254	14	40	22	254
62070	13	40	241	254	33
62075	56	242	254	45	40
62080	238	254	48	56	229
62085	254	58	48	225	24
62090	228	35	17	146	92
62095	1	5	0	237	176
62100	43	35	126	254	58
62105	40	8	254	33	48
62110	203	254	13	32	242
62115	239	224	56	205	162
62120	45	96	105	205	110
62125	25	237	91	75	92
62130	229	167	237	82	225
62135	40	177	70	35	78
62140	42	46	242	112	35
62145	113	35	34	46	242
62150	24	162	35	237	91
62155	75	92	229	167	237
62160	82	225	193	193	194
62165	67	242	42	83	92
62170	17	0	0	237	83
62175	44	242	229	237	91
62180	75	92	167	237	82
62185	225	200	35	35	229
62190	94	35	86	35	237
62195	83	44	242	25	237
62200	91	75	92	229	237
62205	82	225	32	2	225
62210	201	70	35	78	35
62215	205	63	243	56	13
62220	227	237	91	44	242
62225	115	35	114	225	43
62230	43	24	193	94	35
62235	86	43	43	43	229
62240	42	44	242	25	235
62245	225	43	34	58	237

possible whilst in no way affecting the operation of the program

Note that no Rem statements are removed, nor are any other changes made to the substance of the program Typical memory saving is 10% to 15% after compaction

No parameters are required in order to use *Compact*, and the routine is accessed by *Randomize Usr 62000*

Routines in part one

NAME	CALL AT	PARAMETERS
Compact	62000	None
Trace	62331	Speed control Poke 62335 (0=Single Step else 1 to 255=Fast to slow) O/P Medium Poke 62387 (2=Screen 3=Printer)

Trace

Permits the detailed examination of program flow under user control Tracing can be either single step (ie the program waits for user response before the execution of each statement) or the speed of execution may be altered to suit the user

The speed value is entered by *Poke 62336 Speed*, where SPEED=0 (single step), or SPEED=1 to 255 (fast to slow)

In single step mode advance between statements by pressing *Space* Line and statement numbers may be sent to either the screen or the ZX printer This is switchable using *Poke 62387, Output* where *Output*=2 (screen) or *Output*=3 printer)

For *Output*=2, the top left hand corner of the screen is used with the last three line and statement numbers being displayed These scroll upwards as statements are executed

For printer output, the values of successive line and statement numbers are separate from each other by a space Note that the printer only operates when its buffer is full, so that printing does not happen after the execution of each statement but only when enough have occurred to fill one line of output

Trace is called by *Randomize Usr 62331* and commences program execution as though a *Goto 0* had been entered

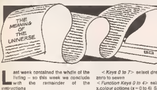
Next week we'll be printing the listings for Renumber and Auto facilities – meanwhile if you're not too keen on all that typing a cassette containing all the routines can be obtained direct from Paul Murray, at a cost of £3 00 Write to him at 5 Hanham Mills Hanham, Bristol, BS15 3NU

```
62250  83   44   242  35   1        62285  245  126  35   185  32
62255  4    0    205  232  25       62290  240  225  167  201  126
62260  225  237  91   44   242      62295  43   167  126  35   32
62265  115  35   114  43   24       62300  235  225  55   201  225
62270  174  229  33   0    64       62305  229  86   35   94   235
62275  126  35   167  40   14       62310  35   195  171  242  0
62280  184  40   3    35   24       CHECKSUM=37621
```

Trace

```
62331  1    0    0    62   0        62421  26   62   32   215  24
62336  50   122  243  237  123      62426  65   62   22   215  175
62341  61   92   33   75   244      62431  215  175  215  6    3
62346  229  195  106  30   231      62436  197  6    8    197  62
62351  205  191  22   253  52       62441  32   215  193  16   249
62356  13   250  138  28   17       62446  62   13   215  193  16
62361  106  243  33   110  243      62451  240  62   22   215  175
62366  1    8    0    237  176      62456  215  175  215  6    3
62371  42   69   92   253  78       62461  33   106  243  197  78
62376  13   6    0    34   114      62466  35   70   35   205  27
62381  243  237  67   116  243      62471  26   229  62   58   215
62386  62   2    245  205  1        62476  225  78   35   70   35
62391  22   241  42   132  92       62481  205  27   26   229  62
62396  229  42   136  92   229      62486  13   215  225  193  16
62401  254  3    32   22   237      62491  228  225  34   136  92
62406  75   114  243  205  27       62496  225  34   132  92   223
62411  26   62   58   215  237      62501  6    0    254  13   40
62416  75   116  243  205  27
```

Programming: BBC & Electron



RAINBOW

by Cy Noble

Last week contained the whole of the listing – so this week we conclude with the remainder of the instructions

Once a *Fill* colour has been selected it remains available until you clear the screen or change the way it fills. Filling blank areas can be done in five ways

1) Hit < Return > – this fills the area with colour as shown
2) Hit < S > < Return > and the fill colour pattern is < S >pread
3) Hit < B > < Return > and the fill is done in vertical < B >ars
4) & 5) Hit < 0 > and the above fills are done in stripes

You can fill < O >pen colours (ie the in between lines) with some other colour. This is best done by switching to the cursor key (hit < J >) and holding down < Return > while moving the screen cursor up or down the area concerned. Be careful as the colour can run out the other side if it is blank or filled with another < O >pan colour. Other keys perform their own individual functions

< @ > – This key returns your fill colour to its basic form after you alter it to < S >pread < O >pen or < B >ars (Mnemonic: where the colour was AT)

< *Keys 0 to 7* > select drawing colours zero to seven

< *Function Keys 0 to 4* > select the GCOL x,colour options (x = 0 to 4). Some amazing effects are possible with judicious use of these options

< *Delete* > clears the screen but leaves your colour choice display and current fill colour intact.

< *Copy* > asks it you want to *Save Load* or *Quit*. Hit < Q > to take you back to where you were at before you hit < Copy > by mistake. < S >ave or < L >oad will ask for a filename (only the first seven letters are used) and will ask for confirmation before Saving or Loading a picture from/to tape/disc. You will be returned to the option you were in. You can actually load a picture without the program. Type *MODE2:*LOAD "filename* and there it is, though you can t do any more to it without the program

< *D & M keys* > – These will keep spraying < D >ots in random positions near the cursor as long as you hold them down. In the current colour with < D > or < M >ulti-coloured with < M >

< Shift > – When using the cursor keys, the cursor will move faster

< J > toggles between < J >oystick and cursor keys and the top line will tell you which one is current. While cursor keys are being used the X,Y coordinates are displayed on the second line

< P > – The pallette clear key. The pallette is a small area in the lower right corner of the screen. In this area you can try out the effects of filling < O >pen colours with other colours, without contaminating the main picture area. It is side by side with the area displaying your current colour fill choice. They are separated by a green vertical line and < P > clears only this paint mixing pallette

< Escape > – Use with caution as it can clear the screen. It will put you back in 'Free Draw' mode and you should only use it if the program hangs up for any reason. Its main purpose is to clear errors such as bad filename when saving and loading pictures

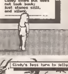
To conclude, the program is a lot easier to use than to describe and what can be done is only limited by your imagination

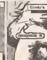
I can supply the program on various formats, for anyone adverse to typing. Write to me at 323 North Circular Road, London N13 5JH, enclosing the appropriate amount – cassette (£10) 5¼" disc (£11 50) or 3½" disc (£15)

The Rogue Program









Programming: Amstrad



PUZZLE

by Colin Ashworth

The object of the game is to complete the puzzle in the least amount of moves and the least amount of time possible.

Instructions are printed at the beginning of the game. The next screen shows you the completed puzzle, when you are ready to begin press any key to randomise puzzle. Your number of moves and time taken are displayed on the screen.

At any time during the game if you press 'C', your percentage of incorrect squares will be shown on the screen. If all are correct it will go into the winning routine. Press 'E' if you wish to break out of the game. Best of luck!

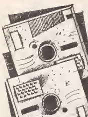
Anagram Notes

10-320	Sets up main variables and defines characters
330-470	Drawing of the completed puzzle
490-570	Main routine
580-620	If C is pressed routine
630-830	Move number in direction
840-900	Randomise puzzle
910-1070	Winning routine
1080-1130	Instructions

```
[illegible]
```

ENLARGE

by Dilwyn Jones



The QL is blessed with the ability to print text in up to four character widths and two character heights I decided to take this a step further and create a routine to enable the printing of character in any size required

The routine is a procedure called *Enlarge* which allows any character in the QL's two in-built character sets to be printed The routine works with a standard unexpanded QL and has been tested on a QL with memory expansion and disc drives attached This was important, because the channel definition blocks may not remain static with expansion devices fitted

To find the Rom character set, three steps are necessary

Step 1 – find the base of the channel table using the system variable SV CHBAS at 163960 decimal (hex 28078) This contains a long word pointer

Step 2 – find the appropriate entry for the channel number in which you are interested There are four bytes for each entry

Step 3 – for a screen channel the character font addresses are located at 42 (hex 2A) into the block and at 46 (hex 2E) into the block Both are long word addresses

Study the listing to see how to write the Peek expressions On an unexpanded QL the Channel One fonts pointers (these are the ones we'll be using) tend to remain at fixed locations, so you could get away with the expressions *Peek-L (167722)* and *Peek-L (167726)* but you'll need the more complicated expressions used in the procedure for discs, I'm afraid

This routine was written on a version JM QL and has not been tested for compatibility with other issues of Rom The procedure uses *Block* to fill in the pixels of the character, so the system used is the pixel co-ordinate system with 0 0 (across down) at the top left of window #1 The arguments for the procedure call are

Enlarge A String gap, wider taller, x,y colour

where A String is any string expression (or numeric as permitted by string Coercion). Don't allow the string to go past the edge of the screen as the routine will not be able to cope! *Gap* is the number of pixels to leave between the characters

Wider and *Taller* – the QL uses a nine by five character dot matrix so *Wider* specifies the number of pixels for each dot *Wider=2* means ten pixels wide Similarly, *Taller* means a multiple of the normal nine pixels up

X and *Y* are the co-ordinates of the top left of the character So *X=0* and *Y=0* means that the character would be printed at the top left of the screen

Colour can be any of the normal colours 0-7 or a stipple colour 0-255 Watch out for odd values of *X* and *Wider* causing funny effects in Mode 8 due to the 256 x 256 resolution

The routine is very useful for producing large characters for subsequent copying to a printer for artwork or poster purposes By printing twice on top of each other slightly offset and in different colours a 3D or shadow printing effect can be produced This is great if you use a screen dump such as the one used in *Easel* This routine can also be used to create title screens which are to be saved on disc or microdrive

```
100 REMark character enlarger for #1
110 REMark    (C) Dilwyn Jones, 1985
120 MODE 4:WINDOW 512,206,0,0:PAPER 0
:INK 7:CLS:CLS#0
130 ENLARGE 'HELLO',2,12,8,50,20,63
140 ENLARGE ' I AM A CLEVER COMPUTER'
',2,3,3,1,116,7
150 ENLARGE ' I AM A CLEVER COMPUTER'
',2,3,3,0,115,2
160 ENLARGE CHR$(141)&CHR$(145)&CHR$(
182)&CHR$(184)&CHR$(185)&CHR$(188)&CH
R$(189)&CHR$(190)&CHR$(191),5,5,3,40,
170,4
170 STOP
180 DEFine PROCedure ENLARGE (string$
,gap,wide,height,x,y,colour)
190 LOCal base1,base2,byte,bit,peeked
,address,char,across,cde
200 base1=PEEK_L(42+(PEEK_L(PEEK_L(16
3960)+4)))-277
210 base2=PEEK_L(46+(PEEK_L(PEEK_L(16
3960)+4)))-1141
220 FOR char=1 TO LEN(string$)
230  cde=CODE(string$(char))
240  SELect ON cde
250   =32 TO 127:address=base1+9*cde
260   =128 TO 191:address=base2+9*cde
270   =REMAINDER :address=base2+1143
280  END SELect
290  FOR byte=0 TO 8
300   peeked=PEEK(address+byte)
310   IF peeked>0 THEN
320    across=x+(wide*(5+gap)*(char-1
))
330    FOR bit=64,32,16,8,4
340     IF (peeked && bit)>0 THEN BLO
CK wide,height,across,y+byte*height,c
olour
350     across=across+wide
360    END FOR bit
370   END IF
380  END FOR byte
390 END FOR char
400 END DEFine ENLARGE
```



AUTOBOOT

by Eric Deghaye

If you own a Commodore 128 with disc dr ve, or a 128D like myself you will find the little program below of some interest. The C128 is a great improvement on the ageing 64 and has a few features on top of an excellent Basic which can be turned to good use

One of these is that the 128 can autoboot programs by just turning on the machine or resetting it. This feature is not documented in the manuals supplied by Commodore but can be implemented quite easily

When turned on, the computer reads track one sector zero of the disc, and looks for a particular code The mechanism of this method is similar to the way cartridges autostart If the first three bytes of track 1 sector contain the Ascii for CBM then an autoboot procedure is activated

The example below is in two parts The first program will create the necessary bytes on track 1 sector 0 of the disc so that when turned on, reset or after typing *Boot* the machine will automatically load and run a program called *Menu* (Program Two)

To prepare a disc, just run Program One on a newly formatted disc, you do not necessarily need to save it on that particular disc Care should be exercised about which discs you prepare this way Crowded discs or discs with large programs might end up being corrupted, so it is safer to use this program on blank discs and copy the files across onto it later

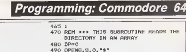
The second program has to be saved on the disc This is the program which will be loaded automatically All it does is to read the directory of the disc strip it to the filenames only and create a menu To load a program move the pointer with the cursor keys in front of the required file name and press return

The program itself is quite simple Firstly, the directory is read from the disc into the array di$ As the content of the array is not suitable for use as a filename it is stripped of the unwanted bits (such as and PRG) Next the content of the new array is printed on the screen and a pointer set next to the filename The program now waits for a CR to be pressed then loads the file whose name is next to the pointer

You will notice that I have used the extra features of Basic V7 0 to make life much easier Also the various colons ( ) at the beginning of the lines are there only to enable indentation and separation of the lines they can be removed without any problems Don t forget to type '£ signs in the listings as # signs

```
100 REM OISK HEADER MAKER PROGRAM
110 OPEN15,8,15
120 OPEN8,8,8,"£"
124 :
125 REM FREE BLOCK 0, TRACK 1
130 PRINT£15,"8-F 0 1 0"
134 :
135 REM ALLOCATE BUFFER TO CHANNEL 8
140 PRINT£15,"8-P 8 0"
145 :
150 DO
160 :  READ A
170 :  IF A=-1 THEN EXIT
180 :  PRINT£8,CHR$(A);
190 LOOP
194 :
195 REM WRITE THE CONTENT OF THE
    BUFFER TO BLOCK 0 TRACK 1
200 PRINT£15,"U2:8 0 1 0"
204 :
205 REM ALLOCATE  BLOCK 0 TRACK 1
210 PRINT£15,"8-A 0 1 0"
220 CLOSE8:CLOSE15
230 :
240 :
250 :
260 DATA 67,66,77,0,0,0,0,77.69
270 DATA 78,85,0,0,162,19,160,11
280 DATA 76,165,175.82,85,78,34
290 DATA 77,69,78,85,0,13,-1
```

```
10 REM ********************************
30 REM ** AUTOBOOT MENU PROGRAM
40 REM **BY E DEGHAYE COPYRIGHT 1986
45 REM ** SAVE THIS WITH DSAVE"MENU"
50 REM ********************************
100 :
110 SCNCLR:COLOR0,1:COLOR4,1:COLOR5,4
120 FAST
125 :
130 REM **** GET DIRECTORY ******
140 DIM DI$(150),FI$(150)
150 GOSUB 470
155 :
160 REM **** STRIP DIRECTORY OF
    UNWANTED BITS
170 L= DP-1
180 FOR I= 1 TO L
190 : X$="":X= 0
200 :   DO
210 :      X=X+1
220 :      X$=X$+MID$(DI$(I),X,1)
230 :   LOOP UNTIL ASC(MID$(DI$(I),
        X+1,1))=34
240 : FI$(I)=X$
241 NEXT I
242 :
244 REM ***** THE MENU SECTION
246 :
250 SCNCLR:PRINT"        LOAD
    WHICH ONE??"
260 PRINT"(USE THE CURSOR KEYS AND
    RETURN TO SELECT)"
270 PRINT
275 :
```



```
280 FOR I=OTOL+1
290 : PRINTTAB(5);FI$(I)
300 NEXTI
305 :
310 SLOW
320 N=0
330 GOSUB 610 : REM INITIALISE CURSOR
    POSITION
335 :
340 REM *** THIS LOOP WAITS UNTIL C
    CHOICE HAS BEEN MADE
350 :DO
360 REM *** AND THIS ONE CONTROLS THE
    CURSOR KEYS SCAN
370 ::   DO
380 ::    GETKEY A$
390 ::   LOOP UNTIL ASC(A$)=17 OR ASC
    (A$)=145 OR ASC(A$)=13
400 :  IF ASC(A$)=17 AND N<=(L-2)
    THEN GOSUB660:N=N+1:GOSUB610
410 :  IF ASC(A$)=145 AND N>=1
    THEN GOSUB660:N=N-1:GOSUB610
420 :LOOP UNTIL ASC(A$)=13
425 :
430 A$=FI$(N+1)
440 REM *** ON 'RUN' THE OLD PROGRAM
    AND VARIABLES ARE ERASED
450 RUN (A$)
455 :
460 END
465 :
470 REM *** THIS SUBROUTINE READS THE
    DIRECTORY IN AN ARRAY
480 DP=0
490 OPEN8,8,0,"$"
500 GET£8,T$:GET£8,T$
510 GET£8,T$:GET£8,T$:IFT$=""THEN
    CLOSE8:RETURN
520 GET£8,T$:GET£8,T$
530 GET£8,T$
540 IF T$<>CHR$(34)ANDT$<>""THEN 530
550 IFT$=""THEN 510
560 T1$=""
570 GET£8,T$
580 IFT$<>""THEN T1$ =T1$+T$:GOTO570
590 DI$(DP)=T1$:DP=DP+1
600 GOTO510
605 :
610 REN **** SETS THE NEW CURSOR
    POSITION
620 POKE 1024+((6+N)*40),64
630 POKE 1024+((6+N)*40)+1,64
640 POKE 1024+((6+N)*40)+2,62
650 RETURN
655 :
660 REM **** CLEARS THE PRESENT CURSOR
670 POKE 1024+((6+N)*40),96
680 POKE 1024+((6+N)*40)+1,96
690 POKE 1024+((6+N)*40)+2,96
700 RETURN
```



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Hidden message

I Stokes, of Rhyl, in Clwyd, writes

Q Can you please tell me how to eliminate *Program Name* or *Bytes Name* on the screen? I have assembled programs with a *Screen$* picture only to find when the next part is loading I get these across the screen. I have tried to fill the whole screen with *Print* statements but it then scrolls the whole screen up to print the message below. If it cannot be removed is it possible to change he colour? I own a Spectrum

A Try this leave the top line of your picture blank (but set to a reasonable background colour) Set the ink colour to be the same as the background on your screen picture Use *Print At 0,0;* in order to position the loading message at the start of the line 0

As long as you use the *Print* statement before each *Load* the message will appear not to appear (if you see what I mean)

Problem edit

Edward Ogilvie of Bristol, writes

Q I have entered into my Spectrum Plus the program 'Music' from Laurie Moore's book *Mastering the Spectrum*, and this is saved on microdrive cartridge The program worked very well but in some way a fault has developed within the cartridge, so that although I can load back the program, one line in the middle of the program is all question marks All other lines are readable. Needless to say the program cannot be run. Can you suggest a way of deleting the question marks (It took me several evenings to enter the program)?

A You obviously know the offending line number, which may or may not be corrupted as well. If it is, the first step is to change it to he correct value The second step is then to set the line length of the offending line to he correct value, so that the line may be edited. If you load your program and using line numbers below the corrupt one, enter the following code

```
LET z=PEEK 23636+ 256*PEEK 3636
FOR I=z TO 65535:
LET a=256*PEEK I:
LET b=PEEK (I+1)
LET c=PEEK (I+3)*256:
PRINT I,a+b:
LET I=I+3+c+d
NEXT I
```

This will give you a list showing you (in two columns) the address in memory of a line in your program, and its line number

When you get to the line number that is wrong, you will need to *Poke* the correct line number into the address shown This is done using

```
POKE address,INT(statement no./256)
POKE address+1 statement no -256*INT
(statement no /256)
```

The line length now needs to be corrected For this you will need to count the number of characters stored in the original line You will then need to *Poke* this value into the next two bytes

```
POKE address+2 length-256*INT
(length/256)
POKE address+3 INT (length/256)
```

When this has been done you should be able to edit the line, and correct your fault

If you still have problems, check the line length that you *Poked* in This must be accurate

Copyright wrong

Paul Corboy, of Stroud, in Gloucs, writes

Q I am 14 and I won a Commodore 16. I have recently written a game based on a very popular BBC TV programme. I wish to market the game and I wondered what I should do about copyright, etc. Can you help?

A This will depend on how closely your game follows the original

Whilst even using an idea would normally be good enough reason for asking permission at least before marketing, you would generally be okay unless it uses another copyrighted item.

For instance, if you use the same name as the TV programme you would have to seek the BBC's consent before marketing, as well as probably paying a royalty

If, however your game is only loosely based on the programme and there are no specific reference to it within the game, then you would have no need to seek consent from any third party, although it's not a bad idea to do so

Unlimited lives

John Lawson of Fife in Scotland, writes

Q Please could you tell me how to find out the pokes for unlimited lives, etc, for software on the Spectrum.

With the pokes found in the *Arcade Addicts Handbook* and other pokes found in Arcade Action, I've been trying to find some sort of relationship with The *Clear* statement and the *Randomise Usr* statement, with the poke I've been using but with no success. Please help!

A The *Clear* statement sets Ramtop to the address specified This leaves the memory between this address and the top of Ram free for use for machine code, in other words unavailable to Basic The *Randomise Usr* statement is used to 'call' a machine code program or subroutine which starts at the address specified in the *Randomise Usr* statement.

A *Poke* statement merely places a value in a memory location eg, *Poke* 377423,152 will place 152 (decimal) into memory location 37742

If this location was used by a machine code program to hold the number of lives that you have at the start of a game then you can see that you will start with 152 lives

Troubled tape

Mark Groom of Hastings in East Sussex, writes

Q I am having trouble with the built-in cassette recorder on my CPC 464, which is now out of guarantee

Despite checking the cassette heads with cleaner, and adjusting the azimuth alignments, the motor on the recorder seems to slow down and speed up when running – you can hear it do so

I cannot load some of my software, although I can load my own programs What can I do?

A Almost certainly the motor on your cassette recorder is broken I'm afraid this is going to mean sending your Amstrad away for repair

Try contacting the Chiltern Computer Service, 90/100 High Town Road Luton, Beds (0582 455684) which will repair Amstrads to check its terms and conditions

Reserved space

Laurence Scotford of Eastbourne East Sussex, writes

Q Is there a 'soft' method for temporarily disabling the Interface 1 on a Spectrum, thus making it effectively 'invisible' to other hardware and software?

The reason for doing this would be to enable incompatible software to be used, without the inconvenience of having to remove the interface first.

A Afraid not, Laurence This and problems like it have plagued the home computer user since the dawn of civilisation as we know it!

Unfortunately it is a fact that much software that exists for the Spectrum and indeed other machines, uses memory that is really meant to be reserved for peripheral devices, such as printers

Apart form relocating the machine code so as not to use the offending memory locations possibly a lifetime's work there is not much else you can do except disconnect the interface

Programming: Bytes & Pieces

Distinct Rems on CBM 64
by Mike Hart

This routine takes all the *Rem* statements in a program and inserts the Reverse code symbol before the statement of the text in the *Rem* statement thus making it appear in reverse

In this way, listings can be made a lot clearer because important *Rems* that demarcate particular sections of the program are highlighted

To change back to normal, type *Poke 856, 32 Sys 828 List* To restore the effect *Poke 856 18 Sys 828 List*

```
5 FORJ=828 TO 882:READ X
6 T=T+X:POKE J,X:NEXT
7 READ C:IF T<>C THEN PRINT"ERROR":END
8 REM SYS 828 TO ACTIVATE
9 :
10 ::DATA 165,44:REM C64/VIC BY DEFAULT
11 ::REM  FOR PETS CHANGE TO 165,41
12 DATA 133,85,165,5,133,68
13 DATA 160,0,177,86,240,19,201,143
14 DATA 240,8,230,86,208,242,230,69
15 DATA 208,238,200,169,16,145,88,208
16 DATA 241,200,177,86,208,17,88,240
17 DATA 13,24,168.5,181,66,133,86
18 DATA 144,214,230,65,178,216,96
19 DATA 7494:REM CHECKSUM
```

Basic Renumber on Spectrum
by F W White

To use *Merge* the program to be renumbered with this, or vice versa Type *Goto 9990* (Enter) then enter the step you want between lines

You will have to renumber all the *Goto's Gosub s*, etc yourself

Be safe and *Save* the prog before running it in case it crashes

It s interesting to enter stupid increment values (ie, 0 0 1 etc) but you may eventually crash the machine

```
9990 LET S=PEEK 23635+PEEK 23636
*256
9991 INPUT "Increment?";I
9992 LET n=1
9993 BEEP .01,50
9994 LET New=I*n
9995 IF PEEK S*256+PEEK (S+1)>99
89 THEN  STOP
9996 POKE S,INT (New/256): POKE
S+1,256*(New/256-INT (New/256))
9997 LET S=PEEK (S+2)+PEEK (S+3)
*256+4+S
9998 LET n=n+1
9999 GO TO 9993
```

Program Eraser on Amstrad
by G A Bobker

This short routine simplifies erasing of programs from Discs *Run* it then press *R* to start, *C* to *Cat* or *D* to *Delete* itself

When *run*, program requests program title then type Enter the type as BAS, etc as usual

This program will assemble the title and type inserts the full stop between them

After each erase action the program automatically does a *Cat*.

(Due to the *Inkey$* function being below standard on the Amstrad it is necessary to put *Inkey$* value into a string before checking or else response time would be very slow   hence reason for lines 80 and 180)

Note that the *Chr$* (24) in print lines produces inverse characters Note also that the comma in Input statements suppress the '?' from being printed

For optimum presentation your screen listing should be identical to this printed listing

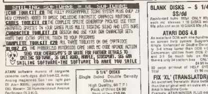
```
60 CLS: GOSUB 260
70 PRINT: LOCATE 9,24:PRINT CHR$(24);"R=
RUN  C=CAT  D=DELETE;CHR$(24)
80 K$=INKEY$
90 IF K$="r" OR K$="R" THEN LOCATE 3,24:
GOTO 130
100 IF K$="c" OR K$="C" THEN LOCATE 3,24
:GOTO 240
110 IF K$="d" OR K$="D" THEN CALL 0
120 GOTO 80
130 CLS:GOSUB 260
140 LOCATE 14,5:INPUT"TITLE      ",A$
150 LOCATE 14,8:INPUT"TYPE       ",B$
160 LOCATE 14,16:PRINT"ERASE ";A$;".";B$
170 LOCATE 16,22:PRINT"Y=YES  N=NO"
180 K$=INKEY$
190 IF K$="y" OR K$="Y" THEN LOCATE 16,2
1:PRINT "*************** ERASING *******
*********":GOTO 220
200 IF K$="n" OR K$="N" THEN RUN
210 GOTO 180
220 A$=A$+"."+B$
230 |ERA,@A$
240 CAT
250 GOTO 70
260 LOCATE 15,1:PRINT CHR$(24);"ERASE FI
LES";CHR$(24):RETURN
```

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Innovation Blues

Over the past few months most of the major micro manufacturers have announced newer versions of their older established machines Compatibility has been paramount while innovation and extra features have taken a back seat.

Take for example Apple with its new Mac Plus The 128k Mac has been around for over two years so it s a safe bet that development on its successor has been going on for over two and a half years So what has Apple done in all that time?

Well it increased the Ram to 1M made the discs double sided and extended the keyboard That couldn t have taken long – double sided 3 5" drives have been around for years, and 4 Megabyte Ram upgrades have been available (though not from Apple) for about six months The major difference between the Mac Plus and the Mac is that discs can now have subdirectories, though this has caused incompatibility problems with around 20% of software not running on the Plus's 128k Rom

The Mac Plus didn't have colour, it didn't have a bigger screen, and no multi-tasking either Given the time Apple had it s disappointing

Sinclair has also launched its successor to the Spectrum the 128k It has extra Ram a few extra sockets and more Rom, none of which are exactly innovative or technically difficult It doesn t have a joystick socket disc or microdrive or even a real keyboard, and to top it all it doesn t run all the 48k games because Sinclair changed the Rom

Blaming software houses isn't the answer – with the old Rom so well documented changing any of it was a dangerous business

In fact I believe that without Dr Ian Logon's best selling disassembly the Spectrum may not have been half the success it has been Sinclair does have a reasonable excuse for the lack of interesting features on the 128k though – it had no money to spend on its development because of a cash-flow crisis

Amstrad has an easier time than Sinclair when it comes to compatibility between machines – thanks to very well documented entry points to the Rom, the contents have changed quite drastically on the CPC machines without affecting compatibility with legal programs

Quite what Amstrad can do with the CPC design in the future is difficult to say, as it has disc drives, a monitor, a good Basic, and runs CP/M

Even Alan Sugar may be hard pushed to think of any more features to add for the money, except the easy option of more Ram and higher capacity drives, as done with the PCW 8512

Atari has announced the 1040ST which is simply a 520ST with 512k more Ram and the disc drive built in

Software should be completely compatible as the Roms are the same, though whether the promised 'blitter will appear, and its effect on existing programs, remains to be seen

Atari has hinted that AmigaDOS, developed by Metacomco may appear on the ST allowing it to run Amiga programs Even if it s true, nothing will actually work, as Amiga programs require more than merely the DOS, they need graphics and IO libraries at least, which are written by Commodore-Amiga themselves, plus, of course the Amiga s unique custom chips

The Amiga itself still not available in the UK, was designed from the start to be the base model in a range of compatible machines, and in the US there are already boards available that replace the 68000 with a 68020 and 68881 maths processor, running incredibly quickly

The amazing thing is that no changes are required – the new processor runs with the existing operating system and hardware although a few programs may have to be nelgged to run because of incompatibilities in the processor itself

Why have most of the major manufacturers seemingly missed an opportunity to introduce compatible machines that are much more than their predecessors instead of just bolting on a few easy features?

Andy Pennell

Puzzle No 203

This is the side wall of Jamie's house During a project on mensuration Jamie came up with the following facts

a) The wall is an exact number of inches wide and measures the same height to the eaves, which are less than 25 ft from the ground

b) The roof slopes at 45 degrees to the horizontal

c) The six windows are wider than 12 inches and are all of identical width (an exact number of inches)

d) The five rectangular windows are twice as high as they are wide and the attic window is exactly square

e) The doorway measures 6ft 8 inches high and 2ft 10 inches wide

f) The total area covered by the windows is just one seventh of the area of the remaining brickwork (excluding the door)

How wide are the windows and what is the height of the wall to the eaves?

Solution to Puzzle 198

A total of 30 sales were made during the third week From the information given it is not possible to determine the exact figures for the first two weeks, but this was not asked for!

In each case the difference between week one and week two, multiplied by the difference between week two and week three came to the total for week one However in each case the total for week three is identical

Winner of Puzzle No 198

The winner is Alastair F D Hunter Esq, of Levine Glasgow who will receive £10

Rules

The closing date for Puzzle 203 is May 6

The Hackers

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